Introductory Lecture
ON
THE PRESENT ASPECTS OF PHYSIOLOGY.

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GENTLEMEN,—The great science of Human Physiology which I have been called upon to unfold to you is a subject of vast extent and of profound difficulty, but at the same time one of such fundamental importance and of such infinite attractiveness that it can scarcely fail to arrest your steadfast attention and to awaken within you a spirit of earnest inquiry.

Physiology is the department of biological science that treats of the functions or uses of the various parts of living bodies. It also takes cognisance of their origin, growth, and development, their mature condition, and their natural decay.

You have already studied the physiology of plants and that of the lower animals, and I have now to invite you to enter upon the investigation of that province which more especially relates to man.

Permit me during the present hour to occupy your attention with certain considerations of a preliminary and general character concerning the present aspects of physiology, regarded, firstly, *as a department of natural science*, and, secondly, *as the institutes of medicine*.

PHYSIOLOGY REGARDED AS A DEPARTMENT OF NATURAL SCIENCE.

Studies preliminary to Human Physiology.

I am addressing an audience composed essentially of gentlemen in their second year of *medical* study. I have therefore to remember the goal whither you are tending; and I have to remember that, although you are now but entering upon a study of *human* physiology, you have all of you been engaged for an entire session in the pursuit of closely related departments of science.

I feel convinced that the plan of study pursued in the Edinburgh Medical School and the other schools of Scotland is well arranged, and that you are to be congratulated on having your first academical winter chiefly devoted to the study of the *exact* sciences of anatomy and chemistry before you pass to the in many respects necessarily inexact science of physiology. I wish it could also be said that all of you during your first year had studied the great subject of physics, for a knowledge of that department of science is not less important than a knowledge of anatomy and chemistry in enabling one to pursue physiology and medicine. It could not be otherwise, for within the body we have to do with the solid, the liquid, and the gaseous condition. We have the movements of levers, the flow of liquids, the evolution of heat and electricity, and the operations of light and sound. We have matter, as it were, laden with energy, passing into the body, suffering various transformations, doing various kinds of work, and finally passing away from the organism useless and effete. The whole process closely resembles in many respects the working of an ordinary machine, and therefore it is that the laws of mechanics, heat, and so on, deserve our close attention. It is to be hoped that ere long we shall have to the study of physics a prominent and fundamental place assigned in the recognised course of medical education; for the study of this subject, so far from increasing the labours of the medical student, lightens them greatly by giving him facts and principles of universal application, and by training him in the methods adopted in exact science.

Most of the present physical aspect of physiology is owing to Ludwig, who introduced into biological study the graphic method of recording movement invented by Thomas Young; to Carpenter, who applied to physiological phenomena Grove's principle of the correlation of force, and so, much about the same time as Mayer, and independently of him, paved the way to the application to physiology of Joule and Helmholtz's great principle of the conservation of energy; much of it, too, is owing to Du Bois Reymond on account of his researches on animal electricity. Physiology is indebted to these and many others, principally because they have brought a profound knowledge of physics to bear on the phenomena of life.

Method of investigating Physiological Phenomena.

The facts of physiology have, like those of any other department of natural science, been arrived at by observation and experiment. It is true that it was at one time the fashion to attempt to discover the laws of nature by efforts of pure imagination. It was easy—nothing could be easier than—to adopt such a method. The absurdity of it is now apparent to all, but nevertheless it is a mode of procedure so common at this very moment that it is essential for us steadily to warn you against it.

For the elucidation of the true and only reliable method of inquiry adopted in physical science let me have recourse to a simple illustration. Let us suppose, for example, that we are going to study the action of some machine, such as a watch. Supposing the watchmaker to have revealed to us nothing regarding the mechanism and mode of action of the instrument, one must readily perceive that it would be difficult for us to find out everything regarding it. Some things would be explained with comparative ease. We would no doubt easily come to the conclusion that the case merely affords protection to the delicate mechanism that lies within, but it would puzzle us not a little to find out the use of the mainspring, the balance-wheel, and the regulator; and indeed, if one knew nothing about the measurement of time, the design of the whole apparatus would be a profound puzzle.

Were we unacquainted with scientific methods, we might, like the philosophers of not so very long ago, proceed to invent any number of fictions to account for the *modus operandi* of the apparatus. We might imagine anything with regard to it. One thing, however, is quite certain, that, in the absence of a revelation from the watchmaker, a real knowledge of the instrument could only be obtained by the methods of observation and experimentation. We would require to use our eyes, and our ears, and our fingers, in order to see, hear, and feel the actions that take place within the instrument. We would dissect it in order to find out its structure; we would subject it to chemical processes with a view to ascertain its chemical composition. We would not, however, content ourselves with merely *observing* the action of the machine; we would not merely look at it or listen to it, but we would try experiments, because the method of experimentation is far more powerful than that of simple observation, in enabling us to ascertain the causes that give rise to events. In our experiments we might study the effect of removing certain parts of the apparatus; we might alter the regulator, give the hands a twist, put a spoke in some wheel, and so on. We would notice the results of our experiments, and in this manner obtain facts to serve as a starting-point for ideas, as stepping-stones to enable us to get at an understanding of the machine—in other words, to ascertain the laws of its action.

It would obviously be a very unfortunate business if any errors were made in our observations and experiments. Suppose that, from hasty observation, we concluded that the minute hand does not move twelve times as fast as the hour hand. Suppose that we moved the regulator to the one side or to the other, and from careless observation declared that no effect is produced upon the speed of the machine's movement, we would necessarily fail to arrive at right conclusions regarding the instrument. Clearly our ideas would be altogether wrong if they proceeded from false facts. Our ideas too might turn out to be exceedingly ridiculous if we did not take care to make a thorough examination of the apparatus. Some one who might be unable to find his way into the interior of the box, but who nevertheless might be anxious to advance some theory regarding the motions of the hands, might, after the manner of the ancients, advance the interesting hypothesis that behind the dial there sits a spirit slowly but steadily turning the hands and pointing them successively and repeatedly, as if with emphasis, to the strange-looking signs upon the mysterious circle. He might, mayhap, imagine that there is not merely one, but three spirits—one for each hand—

and that the noise within the box is produced by such spiritual communications as are necessary for maintaining the orderly and harmonious movements of the strange-looking fingers.

Many persons would no doubt be highly entertained, possibly for a time even satisfied, by such an ingenious idea, but doubtless no further attention would be paid to it the moment an inspection of the interior revealed the delicate mechanism by which the revolutions of the hands are brought about.

You will see that I am not too fanciful in this when I remind you that, in the fifteenth century, Paracelsus ascribed the bodily actions to a spirit that sits above the stomach. He called this phantom Archæus, or the spirit of life. Archæus was supposed to superintend the preparation of the food; it selected the good and rejected the bad. But if this quaint little spirit chose, he could at any time be not over nice in the preparation of the nourishing matters; he could accept the bad as well as the good, and so land the unhappy individual in a sad plight. Archæus was supposed to have a number of minor spirits subordinate to him. Every organ of the body had its spirit, and Archæus reigned over them all. When the minor spirits obeyed orders, these organs did their work properly, but sometimes they rebelled: the spirit in the liver became lazy, that in the lungs mayhap became violently excited, and so disease resulted.

But to return to my illustration: the gist of it is this. In order to arrive at right conclusions, we must reason upon facts that are really facts, and our observations and experiments must be sufficiently comprehensive.

This is the inductive method of research—a method which has always formed the very backbone of all scientific progress.

We might, however, adopt another method of procedure. We might, from a previous knowledge of various facts and principles, form certain conceptions or theories regarding the mode of action of our machine, and then proceed to test these by experiment; and it has certainly happened that many brilliant discoveries have resulted from this—the deductive method. But in this, as in the other case, the truth is ascertained by observation and experiment, or, as it is simply termed, the experimental method.

The method adopted by us in investigating vital phenomena is precisely the same as that which I have indicated in the simple illustration I have placed before you. We are surrounded on all sides by bodily machines that live and die—machines possessed of powers surpassing those of any machine that ever was fashioned by human skill. The Designer of these living machines has not revealed to us anything regarding their structure, chemistry, or mode of action. Our knowledge regarding them has been, and must ever be, arrived at by working inductively from experiment to theory, and deductively from theory to experiment.

It was Hippocrates, some three and twenty centuries ago, who began systematically to investigate living phenomena by the method of observation. Fortunate for us would it have been had the path which he opened up been pursued by those who followed him. Ignorance and superstition soon, however, enveloped it in darkness; and it was not fairly reopened until our immortal countryman Harvey found his way into it, and Bacon paved it as a highway for all time.

Two centuries and a half have indeed elapsed since Harvey, by experiment, discovered the circulation of the blood, and thereby ushered in the modern era of physiology, but it was reserved for the German, Haller, to thoroughly adopt the experimental method in biological study, and thus to enable physiology to take its rank as a science. Although Haller lived only about a century ago, the progress that has been made is indeed marvellous. Already the whole living world has been ransacked by eager investigators, and an amount of knowledge has been accumulated regarding living things, which is so vast in its extent that no human mind is now able completely to master it. It is my business to help you to study the more important facts that have been ascertained in physiological science, together with the prominent theories and hypotheses that have been framed regarding them. I have at the same time to teach you those practical methods of research that are needed in order to test the accuracy of facts already advanced, to help you to penetrate the unknown, and so to assist in the further revelation of the truth.

In all your inquiries regarding living things, whether in a state of health or in a state of disease, you have to attend (1) to their structural composition; (2) to their chemical composition; and (3) to the functions which they or their parts perform.

Unquestionably the most advanced department of human biological study is that which relates to the structure of the body. This, so far as it can be ascertained by the unaided eye, has been fully made out. A great mass of information has been arrived at regarding the minute structure as determined with the aid of the microscope; fresh facts are continually pouring in, but progress in this direction is now difficult owing to the excessive minuteness and delicacy of the ultimate structures of which the body is built up.

We do not know nearly so much regarding the chemistry as we do regarding the anatomy of the body. Progress in this department is particularly difficult; it involves a prosecution of the very highest chemistry. Indeed, the chemical processes which are necessary to reveal very many of the chemical changes that take place in living beings have yet to be invented. Moreover, the chemical constitution of living things is very unstable; it is continually undergoing some degree of change during life, and at death it rapidly alters. These things, therefore, conspire to retard the advance of physiological chemistry.

A great deal has been learned with reference to the functions of the various parts of the body. The functions of the muscles and nerves and the organs of nutrition have been carefully explored, but, extensive though our knowledge be with regard to these, there are many gaps yet to be filled up. We are not thoroughly acquainted with all that happens in any one organ. No stone, however, is being left unturned; the secrets are being sought out with the aid of the most refined physico-chemical instruments and processes. Now and then a considerable stride is made in discovery, but, inasmuch as most of the easy things have been done, our further advances are not very rapid, although the army of investigators is a great one. Yet, nevertheless, in consideration of how difficult of access are the citadels which physiologists are now attempting to storm, we have, from the sure though slow success that attends our efforts, ample reason for pushing steadfastly forward.

The Body may be regarded as a sort of Machine.

I have alluded to living machines, and it may be well for me, without further delay, to explain what I mean, and *how much* I mean by such phraseology.

You are aware that in a machine such as a steam-engine the coal or other combustible material is the source of the power. The clashing together of the atoms of oxygen with those of carbon and hydrogen is the source of the heat, which in its turn gives rise to mechanical energy and does the work. When the coal is consumed, nothing remains but its effete and useless ash. The machine inevitably ceases to do more work, unless it be promptly supplied with another relay of combustible matter. It has long been known that in such a case the matter that enters the machine, although it is *transformed*, is *not destroyed*. Nothing is lost. It has also been proved that the same holds true of the *energy* that is potentially stored up in the coal. Although transformed into thermal and mechanical energies, and finally dissipated in the form of heat away into space, it is not destroyed. The energy of the coal is utilised and made to do work, but it is *not annihilated*. Nor, on the other hand, is there one jot or tittle of it created in the machine: what goes in comes out; neither more nor less. All this—which is embraced in the great law of the conservation of energy—has, as regards the non-living world, been proved experimentally.

At a future time we shall study the great process of nutrition. In so doing, we shall trace the food through the physico-chemical process of digestion. We shall find that the food particles pass into the blood and are carried to every part of the body to supply material for the doing of work, for the building up and for the repair of the various tissues. We shall find, further, that the particles of the food, after the manner of the coal in the engine, are ultimately burned within the body, and are thrown out of it when they have become useless.

In the body, just as in the engine, it is quite certain that

matter is neither created nor destroyed. It is also certain that the food in the one case is, like the coal in the other, concerned in the evolution of energy within the body, and in the performance of its various kinds of work. But it is not certain, for it has not been experimentally proved, that all the work is done by the power derived from the food. It is not certain whether all the energy that enters the body comes out of it, or that no more work is done than could be accomplished by the energy of the food. In other words, the law of the conservation of energy, although applied deductively to the animal body, has not as yet been experimentally proved in this connexion.

This, however, is not surprising, considering that not very many years have elapsed since the law of the conservation of energy, springing from the labours of Grove, Mayer, Carpenter, Joule, Helmholtz, and others, was enunciated, and considering the great difficulty of the inquiry more especially in the case of the work done in connexion with the brain.

I need scarcely remind you, however, that it is entirely contrary to our everyday experience to entertain the idea that we can do work unless we eat. We may, indeed, in a thoughtless moment, propose to ourselves to do an unlimited amount of brain or muscular work, but very soon the experience is certainly attained—however prone people are to forget it—that with an insufficient amount of food, and a too severe expenditure of our energies, our brains become impaired, memory fails, the reasoning process becomes weak, difficult problems are left unsolved, the stomach becomes unable to do its work, the heart may break down, and then the whole organism is rendered useless.

You will have to consider whether or not such facts as these do not in a very decided manner suggest that the body is a sort of machine, and that the work which it does is accomplished on the same principles as in any ordinary machine; that is to say, in obedience to the law of the conservation of energy.

I repeat to you that this has not been proved, but it is to be noted that the difficulty of solving the problem in any other way was the first glimmering of the law of the conservation of energy itself. To Mayer and Carpenter the facts of physiology suggested those considerations which, in the hands of Joule and Helmholtz more especially, have led to the establishment of this law in the non-living world.

The prevailing aspect of Physiology at the present time is undoubtedly physico-chemical. The vitalism or spiritualism that Stahl revived in opposition to the physical teachings of Descartes is receding, and the neglected thoughts of Descartes, so admirably restored to us by Huxley, are again coming boldly to the front, and demanding our serious consideration.

Every fact with which we are acquainted tends to show that the body, mysterious and inexplicable in many of its ways though it be, is virtually a machine; that is to say, its actions appear to be regulated by physico-chemical laws,—just as much as those of any machine of human contrivance. It is true that the living grows in a way very different from the ordinary machine that is put together by the hands of a visible maker. It is true that it can to a large extent repair itself, which no ordinary machine can; but these details, when rightly regarded, do not appear to me to be, in any way, opposed to the view that the principle of action is the same in both.

No doubt there is a mystery in life; there is a strangeness in the manner of vital things. From the seed to the blade and the full corn in the ear, from the dawn to the sunset of existence, there is mystery. But let it be remembered that there is mystery in other things. There is profound mystery in atoms and in the forces which they and their combinations exhibit. There is mystery all around; a mystery in the atmosphere, in the water, and in the earth, as well as in living things that are formed from the dust. In the elasticity of the watch-spring there is mystery; in electricity and in light there is mystery. There is mystery, too, in the heat that moves the rough machinery of our engines, and the exquisite molecular machinery of the growing seed; and although its effect in the one case is more obvious than in the other, the necessity for heat as the motive power is just as great in the less evident as in the more evident case.

We must search for the vital secret in a molecular, and therefore invisible machinery, where heat, as in the case of the growing seed, can throw the molecules into those motions which we designate life. It is quite true, as has often been pointed out, that the same heat can produce growth in one egg or seed, while in another it gives rise to decomposition, and the reason commonly assigned for this is, that the one is living and the other is dead, and this is passed over as if it were all that can be said regarding the matter. No thoughtful mind can rest satisfied with such a statement. We cannot be satisfied with words that merely cloak our ignorance. We must endeavour to frame some hypothesis that will really in some measure grasp the case. We must imitate Ampère, when he constructed his hypothetical arrangement of molecules to explain the powers of the magnet, or Du Bois Reymond, when he offered an explanation of the electrical currents in nerve and muscle by his hypothesis of polarised particles.

After the manner of the chemist and the physicist, let us imagine that in all vital action we have to deal with a molecular machinery, in which thermal and luminous energy in the case of the plant, and chemical energy in the case of the animal, give rise to the movements which we call life. Let us speculate further with the aid of analogy. Let us put the coal in the engine, and the water in its boiler, but before applying heat let us consider the case. All the arrangements are ready for the production of motion. There is energy stored up in the coal in a potential state, it only requires to have heat applied in order that those chemical changes may ensue whereby the apparatus will pass into the kinetic or moving state. Let me say for convenience, that the machine is not alive, it is not busy, till it moves and gives a sign of its power.

A seed at rest may be compared to the engine with its fuel unlighted. It is in a state of inaction, its power is merely potential, its vitality is "dormant;" but apply heat, and the molecular machinery of its protoplasm moves; its state is now kinetic—that is to say, a state of motion; it grows and develops, and therefore we say it *lives*. But suppose we allow some subtle poison to act upon the protoplasm of our germ. Let it be penetrated by some coagulating acid: the application of heat now no longer brings about the motions that end in growth, but in place of them those motions that lead to the disorganisation of the germ. The heat now as before calls forth a kinetic, a moving state, but we do not call it living, because the events that mark *this* kinetic state differ from those that mark the normally active condition. Why this difference? We speculate again, and suggest that the poison has so disturbed the delicate molecular machinery of the protoplasm that it can no longer move in its peculiar manner, but in place of this it goes to pieces. Just as in the engine, some corroding acid or other dangerous chemical may so affect the machinery that the introduction of the burning fuel, instead of giving rise as once it did to those beautiful and harmonious motions that made it look like a living thing, now rends it in pieces, and so shivers it into a hopeless wreck.

All this is speculation, it is hypothesis, but it is suggestive, and therefore valuable. It is based upon analogy, and if you consider it carefully, you will, I fancy, feel that as soon as you grasp the idea of this molecular machinery, the veil which shrouds vitality in mystery begins to rise, and a ray of light begins to look out from beneath.

We must picture the molecular machinery of a muscle evolving mechanical power; the molecular machinery of a nerve-cell evolving nerve energy; the molecular machinery of the nerve-fibre quivering at the touch of a stimulus; the molecular machinery of a gland-cell elaborating new products as in a minute chemical laboratory. It is all hypothetical; but without the aid of such a hypothesis everything would appear incomprehensible, and we should have to wander back again to Archæus and his train of spirits.

One more thought in this connexion demands our attention. You may say, How is it possible to compare an *intelligent* human being to such a crudity as a steam-engine that cannot think, that has no will of its own, and that merely moves hither and thither at the touch of its driver?

I beg you to observe the language that I have employed. I have been comparing man's *body* to the engine. You are not to imagine that I am going to lead you to the supposition, which I am persuaded is not warranted, that man is to be regarded as nothing more than a machine. It is the feeling that we are *a very great deal more* that makes us recoil from what are, I believe, essential mechanical ideas. I admit that, in the consideration of those actions connected

with the brain, it is excessively difficult to arrive at a definite conclusion as to how much is to be ascribed to the play of mere physico-chemical forces in the brain-tissue, and how much to the psychical entity—the driver of the machine; but I do not admit that the mechanical theory of life, pushed to its proper limit, ought to create a disbelief in man's *responsibility as an intelligent, free, voluntary agent*, or in those destinies disclosed by revelation.

I therefore feel it to be my duty to oppose the purely mechanical aspect which has by some been thrown over Physiology.

Evolution.

When we come to the study of development, we shall find ourselves brought face to face with another problem that has, no doubt, already occupied much of your attention: I mean the doctrine of evolution. As my lecture of to-day is intended to indicate the nature of my teaching on certain important subjects, you will permit me to refer to this topic.

You are aware that, as we descend the two lines of plant and animal life, the organisms become less and less complicated, and they come to resemble each other more and more—that is to say, the two lines, like the limbs of the letter V, converge below until they meet each other in living forms that merely consist of particles of undifferentiated protoplasm that puzzle us to say whether they belong to the plant or to the animal series.

There are affinities more or less marked between the various members of either line, so that they are gathered into groups. There are, however, distinct breaks in the chain; numerous links are wanting, so that the transition from one group to another is often sudden and abrupt. Nevertheless, there is a tolerably gradual transition from the simplest to the most complex. This is one *fact*, and it is a great one.

Geological records show that all the forms of life now existing did not appear at the same moment in history. It is certain that those things which are now low in the scale appeared first. The simple living structures came earliest upon the stage, and were, as ages rolled on, followed by those of greater complexity.

Many of the primitive forms have held their place—their races are still living; but many others have fallen victims to the catastrophes that have arisen from the internal troubles of our planet, or from the warfare of the struggle for existence. This is another great *fact*, with a theory appended, the truth of which no one will gainsay.

When we study the development of even the most complex living things, such as may be seen in daily occurrence around us, we find that they all take origin in particles of protoplasm, to all appearance as simple in structure as some of the simplest of those minute organisms at the foot of the scale of life. As these develop, their structure becomes more and more complex; one thing follows upon another; various structures are produced, some of which disappear, while others remain as the parts of the fully formed individual. There is a procession from the simple to the complex, from the general and undifferentiated to the special. This is the *evolution of the individual*, and *this* evolution is a great and certain fact.

And now comes the question, often asked, yet ever fresh to us, How in the history of the world have the complex followed the simple forms of life? Has there been a succession of distinct creations, or a process of evolution gradually going on, whereby in successive epochs the complex bodies have resulted? It is indeed fascinating, on the latter hypothesis, to look back down the long dim vista of receding ages, and to picture the struggling life of a formless protoplasmic jelly slowly rising, as if with a steady but resistless ambition; triumphing more and more over the difficulties of existence; adapting itself to move readily in the water and in the air; becoming more and more subtle in its methods of preparing the substances suitable for its nourishment; establishing a telegraphic or nervous apparatus for sending swift messages from one part to another of the complicated machinery; slowly constructing organs by which mechanical, chemical, luminous, sonorous, and other motions may all throw the telegraphic system into operation, and thereby minister to the production of the sensations of touch, of taste, of light, and of sound, by which its relations to external things are rendered such that the sound and the light and the other modes of motion can assist it in the attainment of its ends and in rising to a still nobler evolution.

Moreover, how fascinating it is to regard the every-day development of any complex living form now existing as a brief repetition in miniature of some of the leading situations of the great drama of life that has been slowly acting from the dawn of vitality until now.

So fascinating is it all, that it is scarcely surprising that some have gone still farther back, and have pictured a primeval matter giving rise to what we at present call elements, these elements in turn uniting to form compounds more and more complex, until finally protoplasm spontaneously arose, and the sun's rays threw its molecular machinery into the motions of life, and out of it every higher form slowly arising.

It is fascinating indeed, but I beg you to remember that all this is mere *hypothesis*—it is only romance. As we shall afterwards see, we have no sufficient experimental *evidence* for believing in the spontaneous origin of living matter; nor have we, however beautiful Mr. Darwin's conception of the survival of the fittest in the struggle for existence may be, evidence sufficient to show that in past ages the various forms of life have arisen by a slow development of one into another. Even now, notwithstanding all the varieties of such animals as dogs and pigeons which we, by varying the conditions of existence and of breeding, can produce, do as we will, a dog remains a dog, a pigeon remains a pigeon.

At the same time there can be no denial of the fact that the evolutionary hypothesis has proved to be of great value in offering some acceptable explanation of many of the facts of development, such as the appearance and disappearance at an early period in the development of man of those blood-vessels which are permanent in the gills of the fish, and so with other cases. Such a fact as this is intelligible, if we regard the embryo as briefly repeating its pedigree of past ages, and on no other theory yet advanced does such a fact receive so intelligible an explanation. The evolutionary hypothesis has certainly given quite a new aspect to the facts of development, and has proved to be a great stimulus to the study of this subject. At the same time, you will be good enough to remember that I am not advocating the evolutionary doctrine as anything more than a hypothesis, which, although unproved, is nevertheless of much value in suggesting a way of solving some problems which hitherto have received no acceptable explanation.

Permit me, however, to make this remark. Some appear to think that if the evolutionary doctrine be received, a belief in man's psychical element is at an end. I confess I wonder at such a conclusion, for it does not appear to me more surprising to think of the addition of the psychical element to man when he first appeared, than it is to think of its addition in the everyday development of the individual that goes on around us. The one is not more incomprehensible than the other, nor does it appear to require less of the interference of Divinity.

It seems probable that, as time runs on, the Darwinian hypothesis will be supplanted by some other doctrine more in accordance with all the facts of the case; meanwhile we may safely say that any doctrine which does not fully recognise the existence of an incomprehensible Designer, who created matter and energy and the laws which regulate their changes, will never have a permanent hold on the human mind. Moreover, with regard to man, it is not *practically* of much importance how he has appeared on this earth. It matters little whether an ape were his progenitor or whether he was specially created on the type of the ape, but higher than that individual. We have to do with man as he *now* is, and with his undoubted capabilities of *becoming* or evolving. What does it matter if an ape has been his great-grandfather—why,

"A man's a man for a' that!"

As the last consideration in this connexion, let me indicate a great practical aspect of *that* evolution which we know to exist. The daily evolution of man from a simple germ to a complex being is a certainty, and it is with this daily evolution that we have chiefly to concern ourselves. The whole process of education is an evolution. Simple acts and simple ideas must precede those that are complex. We must creep ere we can walk, and walk before we can run. We must add two and two ere an algebraical equation can be comprehended. This education is most easy before the

brain-plasm has arrived at maturity, apparently because it is a *material* evolution.

To a large extent our evolution is altogether independent of our will. Involuntarily an individual develops into an actor, and a thinker as powerful, and it may be as peculiar as his progenitor; at the same time, however, we hold our evolution to a large extent in our own hands. Apart from the spell of surrounding circumstance, there is within us the voluntary power by which we can do or refuse to do those things that are calculated to bring about our highest evolution. There is within us a continually upward tendency, for what is ambition but a great evolutionary lever stimulating us to move upwards, and prompting us to give heed to those conditions which bring this about. It is in this that one of our gravest responsibilities is to be found, for assuredly we are culpable if we neglect any line of thought or action calculated to bring about the highest evolution of which we are individually capable, and still more culpable if we are guilty of those thoughts or actions which retard evolution, or reverse the process, and impel the individual to a lower standpoint. This is the great social aspect of physiology. The highest success of nations, as of individuals, is only to be attained by close and severe attention to the inexorable laws of physiology, and therefore it is that a knowledge of physiology is incumbent on all, in order that disease may be diminished, and in order that every individual may be raised to his highest power, or, in other words, in order that the bodily machine may work to its highest capability.

I have thus alluded to one or two of the more prominent features of physiology *per se*; let me now ask your attention to this great subject regarded as the Institutes of Medicine.

PHYSIOLOGY REGARDED AS THE INSTITUTES OF MEDICINE.

Physiology lies at the very foundation of rational medicine. It is true that long before physiology had its birth and was rocked in its Grecian cradle by old Hippocrates, something or other was done to heal the maladies of suffering humanity. The leper was cleansed, and the mentally troubled were brought under the spell of priestly influence.

Hippocrates appeared, and strove to rescue medicine from the region of pure imagination, and to place it on the secure basis afforded by the careful observation of the workings of nature. This man was a model for all time. He wisely discerned that the secret of progress is to get at accurate facts. When his patients visited him he did not content himself—as was the fashion before his time, and as is so much the fashion at this moment—with merely "remembering his cases." He inscribed their history upon tablets, so that the failure of his memory might not lead him into error regarding past events. The old Hippocratic method is just the one now adopted by those who really strive to advance medicine. But Hippocrates was forgotten; the Grecian and Roman empires succumbed; barbarism set in; and it was not until a comparatively recent period that any important advance was made.

How could surgery advance until Vesalius showed systematically the positions and relations of the muscles, the bloodvessels, and the nerves, and until Harvey demonstrated the circulation of the blood. How could the practice of medicine begin to pass from empiricism into rationalism, from mere guesswork into sound theory, until Harvey appeared; until Haller systematized physiological facts, and so placed them in the logical order of science; until the physico-chemical nature of digestion was demonstrated; until Charles Bell proved that the anterior and posterior roots of the nerves have different functions; until Marshall Hall explained those nervous actions which we now call reflex; until insanity was perceived to be a disease of the brain, and the demons, together with Archæus and all his train, were finally banished into the limbo of old metaphysical curiosities.

Clearly, the position of physiology is fundamental. Before we can comprehend diseased conditions, we must study those states that are characteristic of health. When our watches go wrong they cannot be put right by persons unacquainted with the structure and with the normal or healthy action of these machines. So is it with the body. We cannot understand the matter, and therefore we cannot frame a *rational* system of remedial measures unless we possess a knowledge of its healthy condition, and the manner in which this is maintained.

You have to study, first of all, the *physiological* or healthy condition, and then the *pathological* or diseased condition. You will find that there is no sharp line of demarcation between physiology and pathology. The state of health passes insensibly into that of disease; for diseases are nothing more than unhealthy alterations in the physico-chemical constitution and action of the body. Pathology is therefore only a *modified* physiology. You will find that when you stand face to face with disease, that your physiological knowledge is continually in demand; and be assured that he who has the deepest grasp of physiology will certainly take the lead in unravelling the diseased state, and in propounding a rational method for its treatment.

But a study of the diseased state is not merely of value with reference to the treatment to be adopted; it is of the greatest value from a purely physiological point of view. In the watch illustration we saw how we might experiment upon it by putting a spoke in some wheel, or by twisting the hands, or by touching the regulator. In the diseased condition we have experiments performed without our aid, that assist us in comprehending physiology. When a bloodvessel bursts on one side of the brain and the opposite side of the body becomes palsied; when a part of the brain becomes disorganised, and the memory of words is lost; when the portio dura nerve is paralysed and the sense of taste disappears from the anterior part of the tongue; when an aneurism presses upon the sympathetic nerve in the neck and causes a change in size of the pupil of the eye on the same side; when a tumour compresses the gall-ducts and prevents the escape of the bile, or the duct of the pancreas, and interferes with the passage of its juice into the digestive canal; how interesting and how important to the physiologist, as well as to the physician, are the results of all these experiments. This is a field of physiological study open to all of you as long as you pursue medicine. The wards of a hospital, the sick-room, are after all but physiological laboratories in which nature and accident perform momentous experiments, and in which you, as the practitioners of medicine, must perform momentous experiments too.

The term Institutes of Medicine is an old one. Under this title pathology as well as physiology were taught, but since both these subjects have advanced so greatly, it has been necessary to divide the Institutes between two professors. Nevertheless, although the term is a little apt to mislead now-a-days, and although I certainly do not mean to invade the province occupied by your distinguished Professor of Pathology further than is necessary for the elucidation of physiological phenomena, still it is essential for me to remember that I have to teach physiology, not merely as a branch of natural science, but also as a department of the Institutes of Medicine. I have to remember that it is my first business to teach those who are to become, not anatomists, not chemists, not physiologists, but practitioners of medicine. At the same time, however, I promise you that I will not forget the interests of physiology. I hope so to teach all of you, that you can find in the diseased state a field for profound physiological study, and some of you, to incline in the direction of pure physiology, which has been chosen by those of us who comprehend what the demands of physiology have now become. I have to train the pure physiologist as well as physiological physicians and surgeons.

There are some departments of higher physiology where the practical applications of the subjects are not as yet evident. You know it is the same in other departments of science. To these, however, we must give some heed. I must ask you not to neglect what I may have to place before you because you cannot always see how it will help you to prevent or to heal some trouble; for you will remember it has often happened in the history of science that suddenly the most splendid practical applications have shot forth from regions whence they were least anticipated. Who could have imagined when Galvani sat on his balcony in Bologna watching the quiverings of the legs of a frog as they dangled on a copper hook against an iron trellis-work in the evening breeze, who, indeed, could have imagined that therein was the germ of the great discovery of galvanic or voltaic electricity, and that the practical application to come out of it all was the construction of, as it were, a great nervous system, covering the whole earth, and quivering

with immortal thought. Imagine what would now be the thoughts of those miserable creatures who laughed at Galvani with his frogs' legs and his copper hooks, as a man who spent his time on curiosities and things that had no practical bearings. You will find, however, that in medicine many of the so-called practical men of to-day are as ready as ever to smile at everything whose application they fail to see. Your so-called practical man professes to be a plain-sailing, common-sense sort of person; in truth, however, you will find that he is definite and dogmatic in his statements because he knows so little, and he ventures to advise you because he thinks he knows so much.

After the study of physiology and its modification, pathology, you can comprehend practical medicine; and here you have just to keep in view two fundamental departments of study: first, the means necessary for the preservation of the physiological state—that is to say, Hygiene; and secondly, the means required for the remedy of the pathological condition—that is to say, Therapeutics.

In surgical therapeutics you see how deftly the surgeon applies his splint and his bandage to hold together the broken member, how quickly he applies his thread to arrest the fatal stream, and how dexterously he gets rid of evil by lopping off a diseased limb.

You see the physician, contending with troubles that cannot be got rid of by such mechanical appliances as a splint and a knife, compelled to restrict himself in the main to the use of less potent means, such as variations in diet, rest and exercise, change of air and scene, various chemical agents, heat and cold and electricity.

His achievements are enclosed by a circle, which, though ever widening, is yet a narrow one. Nevertheless, we feel bound to disagree with Petronius Arbiter, when he says that "*a physician is nothing else than a satisfaction to the mind*," for, happily, there are many medical diseases which can be completely cured, and a great many that can be influenced for good by the use of remedial measures.

The success of the physician, however, is certainly very limited. The chief reasons for this limited success are: that we are still unacquainted with many of the healthy actions that take place in the body. The causes of many diseases are still unknown. It is not yet possible to ascertain precisely what parts of the body are affected by some diseases. Obscurity still hangs over the significance of many of the altered bodily actions that are observed in disease. Some of these actions have a fatal, some have a beneficial tendency, and the difficulty is to know which to favour and which to repress. The actions of many drugs and other remedial agents are only partially known, and even when those actions have been ascertained there remains the difficulty that the precise influence of a drug, for example, differs in different individuals, and in the same individual at different periods of his life. But we are not possessed of the power of ascertaining beforehand what are all the respects in which one person differs from another, and therefore we are not by any means always able to predict what will be the precise influence of the remedial measures which we adopt. Hence it is that medicine does not present the characters of an exact science. We cannot in many instances say what is or what will be. Nor can we always with precision wield those powers which we already possess for influencing the constitution of the body and its actions. We have for the present to weigh probabilities and to hit the mark as nearly as we can. This fact need not, however, dismay you who are entering upon the pursuit of medicine. She is daily becoming more exact, and the pleasure and satisfaction that result from an honest and earnest attempt to render her more scientific will quite outweigh any disappointment you may be inclined to feel at finding her lacking much of that precision which gives such charm to chemistry, physics, and mathematics.

It is in the action of drugs that medicine is most indefinite. This is the department which hangs fire and so retards our progress. And it will always hang fire until medical men generally are convinced that the only way in which this department can advance is by working on a physiological basis. It is not enough, in the diseased condition, to go on administering drugs on all sorts of random conjectures. It is essential, for true progress, that the physiological actions of the drug be first explored. In other words, a physiological must precede a pathological pharmacology.

Here, then, is a great field for the physiologist, and this University can claim to have been amongst the first to seriously cultivate it. No doubt many drugs act differently on the lower animals and on man, but even in the human subject the action is not uniform. No one ought to say that because a drug has a certain action on a lower animal that therefore the effect will be the same on man, for this is to substitute mere deductive inference for experiment. The experiment on the lower animal merely gives an indication of what may be looked for when the experiment on man comes to be tried, and there can be no conclusion until the experiment on man has been performed. Moreover, inasmuch as the diseased condition is a *changed* physiological state, it by no means follows that the action of the drug will be the same in the *abnormal* as in the *normal* condition. Here, again, the truth cannot be arrived at by intuition, but only by observing the results of experiment.

Not only, however, is the study of physiological pharmacology essential for the further advance of medicine, but it is also of great importance for the advance of physiology. Many physiological discoveries may be expected from it. The effects of belladonna in paralysing nerves connected with the heart, the salivary and the mammary glands, and the antagonistic effects of Calabar bean, so beautifully investigated by Dr. Fraser, have, like many of a similar sort, a great importance in physiological experimentation, by enabling us to eliminate the effect of this or that part without removing it from the body, or to increase its effect without subjecting it to collateral disturbing influences.

Original Research.

Lastly, obviously the first duty of the student is to learn what is already known; but side by side with this acquirement of knowledge original thought can exist. During student life the nucleus of many an important research has been formed, and nowhere more than in this University, one prominent feature of which, and indeed one important secret of its success and of its greatness, is the encouragement given to the prosecution of original research. I need scarcely remind you that the medals for original thought and work have ever been the honours most highly prized by the medical students of our University, and, if you turn to the names of those who have received these rewards, you will find that most of them are already on the lips of fame.

The search after new truth is in science the noblest vocation that your teachers can suggest to you, and I have to consider it as the highest department of my office to assist you—as in the past I have assisted others—to prosecute original research, and thereby to contribute to scientific progress.

The great fact to be remembered is, that medicine must be pursued in a scientific spirit. Only by careful observation and experiment; only by cautiously comparing and weighing all the facts of any case, and coming to just conclusions from these, can we hope to advance medicine. You have to bear in mind that whenever you give a man a dose of medicine, you perform an experiment, you pass into the region of original research.

I would now ask you to throw yourselves, with all energy, into the studies that lie before you. Seeing that they are extensive, it is very necessary to proceed in a way that is methodical and persevering. You will assuredly never obtain a knowledge of medical science by working at it in fits and starts. You will beware of those persons who pretend to learn things without study, for they are impostors. You will not fall into the delusion that good luck will help you through difficulty, for it will be almost sure to play you false. As Goethe somewhere says,—"It never occurs to fools, that merit and good fortune are closely united." Constant and careful work is needed. The man who desires success must work for it. As old Epicharmus has it, "The gods sell everything good for labour." It is necessary to think much as you proceed, for physiology needs much *sifting* and grasping thought. Anyone who does not think, and *learn to think for himself* too, is sure to become a mere absorber of facts and ideas. We don't want a number of dead black surfaces that merely absorb the light; we want surfaces well polished, able not merely to absorb but to reflect the rays. Above all things, it is necessary to work vigorously, hopefully, enthusiastically.

I cannot conclude this lecture without alluding to my old

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teacher who preceded me in the chair which I have been called upon to occupy. He has indelibly stamped upon the physiological department of this University the impress of his great energy and vast ability. One of the greatest practical teachers that has perhaps ever been known, one of the most resolute combatants of every line of medical practice which appeared to him opposed to sound physiology, and one of the most zealous strivers after the establishment of rational therapeutics, he may feel assured that his name will not be forgotten; for it stands *en bas relief* boldly forth from the wall of every temple of Æsculapius.

NOTES OF A LECTURE ON PYÆMIA.

BY W. MOXON, M.D., F.R.C.P.,
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THE cause of death after great wounds or extensive sores or gangrene was formerly little inquired into: it was ascribed to shock, fever, or suchlike vague considerations. But when post-mortem examinations were made, it was found that internal inflammations are present under these circumstances, and often are evidently sufficient to produce a fatal result. These inflammations, however, are of a peculiar kind. Their most marked feature is a tendency to the rapid formation of pus; hence it was natural to think that the pus had been taken up from the wound or sore, and lodged in the internal part where it was found; and thus the earliest and simplest notion of pyæmia arose. But it soon became evident that the pus in the internal parts is formed by inflammation, and is not simply conveyed there; for the inflammatory process is evident around and in the puriform collection.

The idea and word "metastasis," or transference of a diseased process to a new seat, here lay ready for employment; and, indeed, this vague term still serves a useful purpose in expressing the shifting of a diseased action from one place to another. Still such vague ideas, if accepted as sufficient, repress inquiry; and we must, here as elsewhere, take the facts of the disease, and the results of experimental inquiries which may throw light on its actual nature. Such, indeed, has been the course pursued; and now we are in this position, that we have two distinct departments of facts bearing on the question of pyæmia: the facts from human morbid anatomy, and those from experiments on animals.

To take the latter first. Many distinguished observers have studied the effects of injecting putrid matter into the veins or the cellular tissues of dogs and other creatures: the result is, the literature of "septicæmia." But the bearing of this on our knowledge of pyæmia is not as yet very direct; for by such experiments we do not generally produce those suppurations that are characteristic of pyæmia as met with in the post-mortem room. The animals experimented on either recover, with or without grave symptoms; or die, generally with diarrhœa and collapse, when the alimentary canal shows, on inspection, signs of inflammation after death, and there are congestions, ecchymoses, or inflammations in the lungs and other organs.

It has been said by Dr. Burdon Sanderson that the poison of pyæmia increases in intensity of action in animals successively inoculated with it one from the other; so that an animal inoculated with matter from the peritoneum of a former victim, just dead of disease caused by inoculation with bacteriferous septic matter, will suffer more violently and die quicker than the first victim; and a third animal inoculated from the second will die yet quicker. So that it appeared to Dr. Sanderson that the poison was capable of intensification by a sort of cultivation. These experiments were repeated by Dr. Goodhart acting with us, but we have, so far, not been able to confirm those results. A first dog died when bacteriferous fluid was injected into the peritoneum; but the second dog, when injected with fluid from the first dog's peritoneum, survived, with but slight symptoms.

I have, with Dr. Goodhart, examined the blood in many living cases of pyæmia, grave erysipelas, &c., without finding any bacteria in it. In making such an observation, one must remember that the blood is apt to contain minute particles, similar to the fat-molecules of chyle; and it requires a microscope of excellent defining power to observe these, and distinguish them from bacteria. Such particles you may not infrequently find in the blood of dyspeptic persons; we have found them in some cases in typhus and other fevers, but never in such quantity as to draw a marked distinction from dyspeptic cases. We have not as yet succeeded in discovering any bacteria in the blood of living pyæmic cases; they are often seen in the discharges of open wounds; we have not yet found them in matter from a hitherto unopened abscess in a living person. They quickly appear after death; and in post-mortem examinations, made a few hours after the patient's decease, we have found enormous quantities of bacteria, both in the products of inflammation and to a less degree in the blood. We have seen appearances that would indicate, but not quite certainly, that the bacteria arise from disintegration of white blood-cells or of pus-cells. What part these bacteria play in the causation of septicæmia is as yet uncertain, but there is no inquiry which is of greater interest than this question, nor any that promises more valuable scientific and practical results.

In my experience of deaths from wounds, sores, &c., I have not met with any class of cases that at all closely correspond to these results of experiment by showing enteric disorder, collapse, and quasi-choleraic phenomena. So that I think it is better at present to regard the history of the experiments on animals that I have alluded to as a distinct branch of the history of septic infection, whose bearing on clinical pyæmia is as yet a problem requiring solution.

But if we take the morbid appearances in the human body after death from grave wounds and sores, these form a very definite series, one to which the term "pyæmia" properly applies. I will not describe the well-known appearances of the changes in each individual organ, but will now only consider their distribution in the body, and their general features, so far as will serve to give a view of the nature of the disease. The most frequent seat of the abscesses is in the lungs, and, as these organs receive the blood from all parts of the body, this at first favours the idea of a simple transfer of the pus or of some cause of pus in the blood from the sore to the lung. In other cases the liver is especially affected, and it is interesting to notice that in these cases the sore is generally in the alimentary canal, from which the liver draws its blood. These two facts raise a very strong presumption that the cause of the pyæmic suppuration in the lung and liver is the introduction of pus, or of a pyogenic something, into these organs from the sore. The proof of this is rendered absolute *in some cases* by our finding in the pulmonary artery, in the lung, or in the portal vein in the liver, a portion of purulent clot, while the veins of the sore contain similar clot; and in all cases the peculiarly strict circumscription of the pyæmic inflammatory affection in the lung or liver corresponds suggestively with the like limitation of the distribution of individual branches of bloodvessels in the parenchyma of the organs, thus indicating a dependence of the local disease on some occurrence proper to the vessels.

In some cases no doubt can exist that the lung or liver is thrown into inflammation by the advent of a purulent embolus actually found in the vessel; and thus we have a sufficient explanation of the suppurations in those cases of pyæmia. They arise from embolism, and some would therefore speak of *embolic pyæmia*. We will consider the propriety of this presently. Others, especially in Germany, go so far as to hold that all secondary abscesses arise thus from embolism, and so make all pyæmic suppuration a department of embolism. This we shall see at least the following reasons to think is not correct.

Thus, if we observe the *position* of the pyæmic abscesses in the lung, we find that a very great part of them are limited to the lower lobe, or to the dependent part of the upper lobe, if any at all are present in it; while the ascendent part of the upper lobe is generally quite free, and when affected has far fewer than the lower one: for example, in one instance, out of many, the lower lobes contained thirty-three abscesses, the upper only three. Now if the suppuration depended only upon the casting of emboli into the pulmonary vessels, it would be more likely that the upper lobes would suffer; because, when a person is lying in bed, the breathing, and consequently the circulation in the lung, is freer in the upper part, so that thither the emboli would mostly be carried. Again, although the lung is more usually

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affected in pyæmia than other organs, yet sometimes you find pyæmic abscesses in the liver, &c., as after injuries to the head, when there are no abscesses in the lung. Yet any pyogenic matter must get through the lung on its way from the head to the liver; and one knows no mechanical reason why matters which have passed the pulmonary should stick in the hepatic capillaries. Again, it is yet more frequent to meet with cases, generally more chronic in their course, where the abscesses all form in the external parts of the body—that is, in the teguments, in the muscular tissue, joints, &c. Such cases may recover through the freedom of the viscera from implication. The affection of the joints is often so marked as to justify the term *rheumatoid pyæmia* as applicable to these; and when we consider that through the medium of gonorrhœal rheumatism and scarlatinal rheumatism, these cases are linked to rheumatic forms of arthritis, we find ourselves getting a long way off the embolic pathology we have just described, because *the regions attacked are not such as are exposed to embolism*; and when, again, we know that cases of pyæmia occur entirely without any kind of wound or sore—I have now seen several cases of idiopathic pyæmia where the most careful search showed the absence of any primary sore,—then we find ourselves in another way deprived of the embolic theory—i. e., *because there is no showing any source for the emboli*. Lastly, we must remember that some kinds of pyæmia appear to elect proper seats of secondary suppuration, especially the pyæmia which follows suppurative periostitis, and which produces abscesses in the heart and kidneys, usually without affection of the liver; while, on the other hand, injuries of the cranium, affecting its sinuses, often produce abscess of the liver. Again, pyæmia after typhoid tends to affect the salivary glands; that after scarlatina to affect the joints.

The above facts, taken severally, show that embolism is not the only cause of pyæmic suppuration; taken together, they go far to reduce embolism to the dimensions of one incident, which, among others, determines the localisation of pyæmia on special points.

Now, nothing can be more satisfactory than the history of embolism: we can so well understand how a clot from a suppurating part may be moved on from that part, to set up the same suppuration elsewhere, that the clearness of our knowledge of the incident wants nothing. When, however, we take the rheumatoid cases, which affect chiefly the joints, or other numerous cases where without discoverable emboli the lower lobes of the lungs are chiefly affected, the explanation is not so clear and suffers by the contrast.

Many facts go to show that an impure state of the blood produces greater effects when there is stagnation of it. This is plainly indicated by the position of the abscesses in the dependent part of the lung; but the same truth is also shown by the suppuration of the veins in which thrombi have formed. This I have seen in several marked instances, especially about the prostatic plexus, or behind the valves of the great veins, or in the cranial sinuses. Here the explanation is almost as clear as that of embolism; for it is certain that, when the blood is impure, the impurity will be increased by accumulation where it ceases to circulate, since the effect of circulation is to bring the blood under the action of purifying organs. This we see is so certain that the explanation of the occurrence of suppuration in dependent and stagnant situations is almost as secure as that of embolism; and it is quite possible that the two conditions may coexist, so that *when small emboli are sown broadcast in the vessels of the lungs, those which lodge where the blood is purified freely in the upper part of the lung may not be able to excite suppuration*; while those which stay in the stagnant lower lobes, already œdematous and scarce breathing at all, suffice to arouse the inflammatory process.

From these considerations it would seem that, if we may use the term "embolic pyæmia" as signifying cases where embolism is proved to occur, then we may also use the term "stagnative pyæmia" to indicate the formation of abscesses by the stagnation of poisonous matter within coagula in the affected part. The other cases I have alluded to, where the joints, kidney, or liver are especially selected, are not at present susceptible of more than such hypothetic suggestions as that the poison has a natural affinity for the parts that are inflamed. For when we neither have the embolus nor stagnation to explain the local affection, as in cases of the special disorder of the joints in rheumatoid pyæmia, the glands after fevers, the kidney and heart after suppurative periostitis, then we are obliged to assume an attraction between the part affected and the pyogenic matters in the blood. Of course this is unsatisfactory when compared with the clearness with which we can follow the embolus in its course, or anticipate the effects of the stagnation; but it is the best that we can do at present to consider the fixation of pyæmia in the joints as analogous to the fixation of small-pox in the skin and of typhoid in the intestine.

After this general survey of the indications of its morbid anatomy, we must regard pyæmia as made up of blood disease and local inflammations. We can trace several ways in which the blood disease and local inflammations are related to each other.

Firstly. The general disease may greatly predominate, so that the blood becomes unviable, and death occurs with signs of blood poisoning, revealed during life in the form of high fever and rapid fatal exhaustion, and after death by softening of the great viscera and extravasations of blood and ecchymoses within the tissues, no local suppurations being found.

Also, here we must remember that some cases of pyæmia of a most characteristic kind are found without any kind of sore whatever; we should not say this so strongly unless we had, in several instances, searched with the utmost care through all parts of the body and found no primary disease.

But, in many cases, such pyæmia as this is traceable to the contagion of fevers—such as scarlatina and diphtheria. It is especially to the pyæmia of the puerperal state that this applies. The result of Dr. Hicks's observations showed that, in by far the majority of cases of puerperal fever, the patient had been exposed to contagion of some known fever. The existence of a proper pyæmic contagion is a matter much contested at present; and there is a farther contest, among those who would admit such a contagion, upon the question whether the poison enters by the wound or by the natural surfaces of the patient. Such facts as Dr. Hicks has adduced would show that contagion, in some cases at least, is introduced as in other fevers; while the at least partial success of Lister's antiseptic plan of treating wounds would suggest that the wound itself is a principal entrance for some pyæmic contagions. It will naturally be thought that the pyæmia arising from scarlatinal poison is not properly pyæmia at all; but, in the present state of the inquiry, Dr. Hicks's evidence would show that, if it is not so, such fever is at present confounded with pyæmia; in other words, that clinical pyæmia *now* includes many cases of various forms of fever, modified by the products of a suppurating, placental, or other sore.

Secondly. In another kind of pyæmia the wound or sore produces a morbid matter, which is absorbed, and so poisons the blood. It is probable that the pyrexia of surgical fever is principally caused by the absorption of the products of the wound; so that this kind of pyæmia is allied to common surgical fever. The prevention of putrefactive changes in the discharges of the wounds averts the danger of pyæmia from this cause; and the success of the antiseptic method shows sufficiently the importance of this source of blood poisoning. It creates, however, only one kind of pyæmia, characterised by its appearing later, and running a more chronic course, with secondary suppurations.

It is believed by some that there is a pyæmic *contagium*, which acts first upon the wound, and enters the system there; but further observations are required to substantiate this hypothesis.

Thirdly. In some cases that go by the general name pyæmia, the whole affection is confined to the formation of purulent thrombi in the veins, and the conveyance of these to the lungs as emboli, where they set up secondary suppurations. Such a process is too simple and clear to need further remark.

In these three divisions, each of which is represented by some unquestionable cases, we have three *kinds* of pyæmia—kinds, that is, in the sense that they are disorders of an entirely distinct nature. But I would wish you to notice that they are not different kinds in the sense of being incompatible or necessarily alternative; far otherwise: they my all coexist. It is quite possible that a wounded person may breathe the contagion of a fever or some other foul matter, his blood thus becoming poisoned; and that, as a consequence of this, the secretions of his wound may be more putrescible, thus producing noxious matter that is ab-

sorbed into the blood, adding another depraving element, whose tendency is to set up remotely the condition present in the wound; and again, that the low state to which nutrition is reduced may render the veins vulnerable, so that these inflame, and produce purulent thrombosis, from which embolism conveys portions to start abscesses elsewhere. And although I do not prefer the lumping together of distinct alternatives into one view, yet it is probable that, in the genesis of pyæmia, this association of distinct elements in its causation actually does occur; and that pyæmia is first started by a depraved state of the blood, and that this reacts on the wound, causing in itself and in the vessels around the putrefactive and phlebitic changes which lead to those internal suppurations which give to pyæmia its distinctive characters and its name.

The view I have given, then, may be thus summed up:—Simple embolism, or purulent absorption, or general fever due to contagion, severally form distinct varieties of what is called pyæmia; but in many cases, perhaps the majority, all these conditions exist together.

EXTIRPATION OF A FIBRO-CYSTIC TUMOUR OF THE UTERUS, TOGETHER WITH THE UTERUS AND ITS APPENDAGES.

By E. H. TRENHOLME, M.D.,

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THE following synopsis of a report of a case of extirpation of the whole uterus for fibro-cystic tumour is forwarded to THE LANCET in the hope that it may be of interest to the profession, and to some extent induce surgeons to regard it with more favour than it has heretofore received, and also encourage attempts to save life when thus placed in imminent jeopardy of a sudden termination.

The patient, first seen by me in October, 1873, is a medium-sized, well-developed, dark-complexioned, healthy, unmarried woman of thirty-four years. She is spare of flesh, has a good appetite, and sleeps well. The tumour from which she seeks to be relieved was first recognised in September, 1870, after an attack of what was called "inflammation of the bladder and gravel." It grew steadily and slowly for the next year, when it rapidly increased in size, but gave her no inconvenience till February, 1872, when she had a slight attack of menorrhagia. Hæmorrhage again occurred in May, also at two or three times during the year, the last of which was in July, 1873. Patient enjoys life, and has little trouble, except from the weight of the tumour, and at the menstrual periods, when there is a good deal of flatulence and pain, which passes off as soon as the flow is established.

The tumour fills the abdominal cavity, is firm to the touch, and the parietes over it are freely movable. There appears to be a fluid cyst at the upper part, between the umbilicus and ensiform cartilage, where there is much tenderness. Percussion gives a tympanitic note in either lumbar region, but over the growth the note is uniformly dull. Measurements: at the level of umbilicus, 41 in.; from ensiform cartilage to umbilicus, 9 in.; umbilicus to pubis, 11 in.; right anterior superior spinous process to umbilicus, 10½ in.; left ditto, 9½ in. The os uteri could not be felt or seen per vaginam. The vagina reached above the brim of the pelvis in the direction of the left cotyloid cavity. The right ovary could be felt on the left side of the tumour on a level with the umbilicus. The bladder when distended with urine could be traced out over the tumour in the median line, and extending about three inches above the pubis.

Diagnosis.—From the ascertained facts stated, it was concluded that it was a fibro-cystic tumour of the uterus, probably springing out of the posterior and lateral part of the body of the organ.

Prognosis.—As suppuration had not supervened, and no dangerous symptoms were manifested, it was thought that life might be enjoyed for months to come; and, although the patient was anxious and ready to undergo the operation of excision of the tumour and uterus, such a course was not deemed warrantable, and she was sent home to enjoy herself till life became a burden, or some serious symptom demanding the operation presented itself.

Progressive symptoms.—Patient went on well as usual up to the end of January, 1874, when she noticed for the first time an offensive vaginal discharge, which gradually increased in quantity up to the end of February, when she had what she calls a congestive chill, that lasted for half an hour. This was followed by a high fever, which lasted about three hours, when a profuse perspiration supervened, which lasted ten hours, and, finally, this was followed by a severe headache that lasted a week.

From this time there has been increased pain during menstruation, continuous and offensive vaginal discharge, night-sweats, and a bad odour and taste in the mouth. After the attack the patient's strength and flesh rapidly diminished, so that by the end of a fortnight she was reduced almost to a skeleton. Towards the end of April and during May she recovered sufficient strength to come to Montreal on the 28th of the latter month. She now weighed 137 lb. The abdominal measurements were as follows:—Around the body, on a level with the umbilicus, 41½ in.; ensiform cartilage to umbilicus, 10 in.; umbilicus to pubis, 12 in.; right anterior superior spinous process to umbilicus, 12 in.; left ditto, 11 in. Compared with the size of the tumour in October last, there is on an average an increase of about one inch in each of the measurements.

From the date of admission till 12th June, the day of the operation, attention was directed to the general condition of the patient. Effervescing carbonate of lithia was administered with satisfactory results in restoring the urine to its normal condition, as it had been scanty and high-coloured for some days past.

Operation (reported by MR. JOHN T. DAVIS, student of Bishop's College, Montreal).—Anæsthesia was induced by chloroform and continued by sulphuric ether. An exploring incision to the extent of about six inches was made in the linea alba, with the customary precautions. Each point of hæmorrhage was at once controlled by Péan's forceps or fine hempen carbolised ligatures. An attempt was made to puncture the tumour at a point where indistinct fluctuation seemed to exist, and to draw off the fluid, which failed. The incision was then extended downwards to within an inch of the pubis, care being taken to avoid injuring the bladder; the incision was then extended upwards about three inches to one side and above the umbilicus, making the extent of incision about fourteen inches. The adhesions and vascular connexions, which were very extensive on the posterior and lower part of the tumour (among which was an attachment of the bowel to the extent of about ten inches), were chiefly divided by the actual cautery and knife, every point of hæmorrhage being secured by fine hempen ligatures cut off close to the knot. The uterine ligaments were divided by the hot iron, but this did not prevent persistent hæmorrhage from the right ovarian artery, which was ligated with considerable difficulty. The tumour, being sufficiently freed to be raised out of the pelvis, was then carefully separated from the neck of the uterus, and the latter enclosed in the wire écraseur, and then divided a little above the wire, at about one inch from the os, by the knife. The tumour being removed, the cavities of the abdomen and pelvis were carefully sponged out with carbolised water. The edges of the incision were brought together by eight deep interrupted sutures, and the same number of horsehair sutures superficially. The pedicle was transfixed by two steel needles crosswise of the abdomen, one passing through the centre of the pedicle, and the other, a figure of eight suture, embracing the edges of the incision and upper edge of the pedicle in its grasp. Carbolised lint was placed under the ends of the needles and over the wound. The abdomen was supported by broad strips of adhesive plaster passed over it from side to side. Over this was placed cotton wool, and all was secured *in situ* by a broad flannel roller.

At the completion of the operation, which occupied two hours and a quarter, alarming symptoms of collapse supervened, from which she rallied on the exhibition of stimulants. The patient was then moved to her bed, and a quarter of a grain of morphia given to secure rest, but its effect was to cause vomiting and so much gastric irritation that it was not repeated. Subsequently aconite was given for the purpose of checking the emesis, and encouraging the action

of the skin, which it satisfactorily accomplished. At 10 P.M., the skin being moist, and pulse quick and full, veratrum viride was given to control the heart's action. It acted tolerably well, but had to be omitted as it induced severe vomiting. On the second day the bowels began to be distended with flatus. There was considerable nausea; tincture of capsicum relieved this very effectually. In the evening flatus escaped freely per anum. I need hardly say that the urine was drawn off every four or five hours, up to the evening of the third day, when she passed it without difficulty; the bowels also moved quite freely. On the fourth day she was doing well, but troubled with sore-throat and tendency to cough (the result of a cold caught the day before the operation), for which nux vomica was given with satisfactory results. On the sixth day she felt so well that she said she "would like to be out of bed." On the evening of the ninth day the pedicle separated, leaving a deep cicatrix, which gradually filled up. From this time up to the twentieth day, she was troubled with accumulations of pockets of pus in the parietes of the abdomen, around the cavity of the pedicle. These pockets of pus generally communicated freely with ulcers, but on those days that such was not the case there was a good deal of constitutional disturbance and fever. On the thirty-second day the patient walked across her room, and on the thirty-fifth day walked down town to Victoria-square, some 250 or 300 yards. She weighed 102 lb., being 32½ lb. less than before the operation. From this date forward she gained flesh and strength rapidly, and is now (15th October) free from pains or any other infirmity. Has gained 19½ lb. since the 1st August, and enjoys life without hindrance.

The tumour weighs 16 lb., and springs out from the centre of the back part of the body of the uterus, somewhat to the left side. A No. 10 catheter can be passed through the os, and then through a fistulous opening communicating with a large cyst near the centre of the growth, but rather nearer the upper border. This cyst, when fresh, was full of pus, and holds about 32 oz. The growth throughout is of a dense fibroid character, and inseparably connected with the body of the uterus.

Victoria-square, Montreal.

THE WET SHEET IN SCARLATINA.

BY JOHN TAYLOR, M.R.C.S., L.S.A.

As the present high rate of mortality from epidemic scarlatina may justify practical suggestions prompted by experience, I feel it my duty to endeavour to excite the profession to a reconsideration of the remedial powers of the wet sheet as an auxiliary in promoting cutaneous elimination.

Though all agree as to the importance of promoting and sustaining cutaneous elimination in the prevention of cerebral, spinal, and other congestions, and, at a later stage, the disintegration of mucous membranes, dropsy, and glandular enlargements, yet this simple, powerful, and ready-at-hand auxiliary is unappreciated. Forty years' experience has assured me that this plain or medicated vapour-giving envelope affords the best *external* means for eliminating scarlatinal poison and preventing destructive sequelæ. It promptly suppresses pyrexial heat and itching; produces sleep, with a soft secretive skin, more or less continuously; and enables the digestive organs to accomplish that great desideratum in the treatment of scarlatina—viz., absorption of highly nutritious food. It may be repeated, on the recurrence of the febrile paroxysm, two, three, or four times in twenty-four hours, the patient remaining enveloped from half an hour to an hour. Mothers and nurses who have witnessed its efficacy are most earnest in its repetition. My plan of procedure is to immerse a nightgown, slit up at the front, in hot water (half a pint to a pint), pure, or medicated with a drachm or two drachms of tincture of capsicum, or in the infusion of three or four pods; or in mustard-water, the clear supernatant fluid from a tablespoonful of mustard to a pint of water; extending the gown over the feet by means of a towel immersed in the same fluid, both to be well wrung out and suddenly applied, and the patient quickly packed in two blankets previously placed on the adjoining sofa or bed; another blanket, or two pillows, or an eider-down quilt covering all.

The medicated packing is preferable in the incipiency, and at any other time to evoke the rash, and in cases of cerebral oppression, with pale skin, low pulse, and delirium. Last month I had a case of this type, in which the mustard packing was applied. It did not elicit the rash, but it cured the delirium, raised an alarmingly depressed pulse, and restored the excretions. This effect was solely dependent on the medicated packing, as the patient, a girl of thirteen, could not swallow medicine or food, and enemata had not then been administered. With the aid of a tonic she made the best recovery of three in the same family, and had no sequelæ.

The auxiliary mode of treatment here defined is by no means intended to exclude the ordinary plan which every practitioner's experience has led him to select and rely upon; but I am of opinion that if packing is judiciously incorporated with such reliable treatment, it will be the means of saving many lives that would otherwise be lost, and of diminishing the severity and duration of the sequelæ.

I further believe that in other cases of blood-poisoning the exhibition of medicaments cutaneously by vapour would in some degree neutralise the poison, aid its elimination, and, as in packing, soothe the whole nervous system. During a cholera epidemic in Liverpool I had part charge of a district where nearly all who first went into the hospital died. One woman, with cholera in the malignant form, was packed in a wet sheet with half a pound of mustard, and remained enclosed six hours, notwithstanding her imploring entreaties to be released. She drank copiously of iced water. The vomiting, purging, and cramps began to abate in two hours, and had ceased when she was unwrapped, presenting the ordinary lobster change from blue to red. Gastric fever, with great thirst, ensued for several days, when she recovered as a brand plucked from the burning.

Modern parliamentary mustard, deprived of capsicum and other adjuvantia which made it formerly a condiment so famous, would not have answered the purpose. Doubtless, *persevering cutaneous elimination* is a great medical power.

Not only as an eliminator may the wet medicated envelope be used, but as an antispasmodic in the relief of pain and irritation in any of the membranes, mucous, submucous, or serous; with the aid of chloral, morphia, conium, belladonna, nux vomica, &c., dissolved in the water, or sprinkled on any particular part of the wet sheet. It has the merit of antiquity from the ancient Romans, and among the farmers of Great Britain for the relief of colic and the inflammatory diseases of cattle. A sheet, wet with some herb decoction, or water sprinkled with turpentine, was thrown over the suffering animal, and enveloped by blankets, quilts, and overcoats, snatched from the beds on which "the rude forefathers of the hamlet slept." And, doubtless, many a pang was thus allayed and many a life preserved. Modern experience has witnessed the amazing relief procurable from the wet sheet, in its simple form, in pyrexial and glandular disorders, and from the medicated form in the zymotic and spasmodic affections. In stridulous croup, for instance, I have seen the mustard sheet act magically after other means more orthodox had failed. Its power is also potential in diphtheria simulating croup, and, in strong doses, in inflammatory croup, sometimes averting the impending tracheotomy knife.

The suggestion to use this auxiliary plan of treatment should not be slighted because of its antiquity or of its having been used empirically. Many blessings, moral and physical, have fallen into desuetude, and require revivals to awaken a consciousness of their existence and utility; and this is one of them, lying neglected within our reach. Objection would be rational if the more primitive plan of enveloping the suffering man or beast within the skin of a newly killed animal were recommended; but when one so simple and close at hand, so easily adapted, so soothing, and so powerful as an auxiliary in the routine of medical treatment, is recommended, suffering humanity should have the benefit of it, especially where no self-interest prompts the recommendation—except the satisfaction of doing good by presenting the cup of cold water so typical of charity.

Hope-street, Liverpool.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

ANEURISM OF THE RIGHT POPLITEAL ARTERY; DIGITAL COMPRESSION FOR TWENTY-THREE HOURS; CURE.

(Under the care of Mr. SYDNEY JONES.)

IT is generally acknowledged that well-conducted digital compression for the treatment of aneurism possesses many advantages over instrumental compression, but the difficulty of its application is often urged as an objection to its general adoption. Digital compression cannot be properly and thoroughly carried out without relays of intelligent assistants, sufficiently numerous to allow of frequent changes to prevent undue fatigue in any of the helpers. Such assistants can, as a rule, only be obtained in large medical schools, where students are, to their credit be it said, ever ready and even anxious to second the endeavours of their teachers to benefit their patients and to advance the interests of medicine and surgery. If, in a given instance, digital compression cannot be properly ensured, it is then perhaps the better plan to employ only instrumental, for the secret of success in compression is to be found in the manner in which it is applied. We do not mean to affirm that where compression fails to accomplish a cure it is because it has not been rightly employed, but rather that proper application and cautious continuance will frequently ensure success where carelessness and remissness would have ended in failure. In the following case most of the specialties of digital compression were illustrated. There were ten dressers, two of whom were on duty for four consecutive hours, each assistant keeping up pressure for ten minutes at a time. Digital compression cannot really be kept up longer than this. Beyond this time the finger or the thumb becomes cramped, sensation is impaired, and the compression is intermittent and irregular.

For the following notes we are indebted to Mr. J. Crossman, house-surgeon.

G. M——, aged thirty-one, a policeman, was admitted on June 4th. Three months previous to his admission the patient noticed a swelling of the right knee. On the subsidence of this swelling there remained a small tumour in the popliteal space. The patient could assign no cause for the swelling or the tumour. The latter gradually increased in size for about two months, but for a month before admission it appeared to have remained stationary. Much pain was complained of, especially when the leg was at rest. The patient noticed pulsation in the tumour at the end of the first month. On June 2nd the Divisional Surgeon of Police recommended him to apply to hospital for admission.

On admission, there was a large soft tumour filling the greater part of the popliteal space, somewhat larger than a hen's egg. The walls were thin, the bruit was very pronounced, and the pulsation, though strong, was readily controlled by pressure with the thumb at Poupart's ligament and over Hunter's canal. Heart-sounds normal. The patient was thin and tall, phthisical-looking, and for two years past had been subject to attacks of gout.

On June 4th, at 5.40 P.M., the patient having been placed in comfortable position on his back, with the right leg slightly raised, and supported by a fracture pillow and covered with cotton-wool up to the knee, digital pressure was applied by ten dressers acting in relays, two men being on duty for four hours, and each taking his turn at compression for about ten minutes at a time. At each change the security of the pressure was tested by the dresser going off duty. Powdered starch was used on the shaved part over the artery. The skin was inflamed when the digital compression was discontinued; but there was not the slightest abrasion. The leg became perceptibly colder after about the first two hours; but the fall of temperature was very gradual. There was no pain either in the leg or at the seat of the tumour during the course of the treatment, except that produced by maintaining the limb in a position favourable for the accomplishment of the treatment. At the seat of pressure the pain was considerable at times, but mostly so when the dresser was changed. A part of the pain was consequent on the proximity of the pressure to some enlarged glands. The patient had brief snatches of sleep during the night and the following day. During the twenty-three hours that the compression was maintained the patient had two hypodermic injections of morphia (one-fourth of a grain each); but these were only given when the pain seemed severer than ordinary. In the first two or three hours the walls of the tumour showed distinct thickening, and careful manipulation showed that this was constant and progressive up to its complete solidification. At 4.30 P.M. of the following day (June 5th) pulsation had definitely ceased, and this so gradually that there was some doubt if there really had been pulsation for the last half hour.

Continued pressure was still maintained till 2 A.M. of June 6th, to secure the permanence of the solidity of the tumour. There was slight venous congestion along the course of the saphena vein, chiefly for the first three or four hours. Patient had some difficulty in micturition during the twenty-three hours of treatment. On the termination of the watch the patient at once fell into a sound sleep, which continued for some hours. No bandages were used, and no pressure except that already indicated.

From June 6th to the 23rd the patient was kept quiet in bed, and the tumour gradually contracted to the size of a small walnut. Up to the latter date no pulsation could be felt in the posterior tibial artery, but the anterior tibial was perceptible. The whole length of the femoral artery is now completely occluded, up to the point at which pressure was applied, and as successfully as though the operation for ligature had been performed. On the 24th an elastic stocking with a knee-piece was applied, and the patient allowed to get up. On the 26th the patient was walking about with comfort.

WESTMINSTER HOSPITAL.

CASE OF BULLET-WOUND.

(Under the care of Mr. HOLTHOUSE.)

FOR the notes of the following case we are indebted to Mr. Collingwood, assistant house-surgeon.

William Y——, a sculptor, aged twenty-four, who was admitted into Northumberland ward on June 17th, stated that his thumb slipped while he was raising the hammer of a loaded revolver which was resting on his right thigh. The charge went off with a loud report, and the patient immediately felt a numbness in his left thigh. On examination, a small circular wound was discovered three inches above, and to the inner side of the upper border of the patella.

On admission, no bullet could be detected in the wound, the aperture of which was a little larger than a pea. In the afternoon Mr. Holthouse enlarged the wound slightly, and made a thorough exploration for the bullet, which could, however, not be detected. The bullet seemed to have taken a downward and outward direction for about an inch and a half, but the bone was not exposed, and there was no evidence that the bullet had lodged in the knee-joint. Next day the patient complained of a smarting pain in the left knee, which was swollen, hot, very tender, and had a blush on the inner side. There was a considerable discharge of fetid pus from the wound, which was dressed by the insertion of a plug of lint saturated with carbolic oil, while hot fomentations were regularly applied to the knee, and the leg was placed on a back splint, and kept well raised. Temperature 101·4°; pulse 108; tongue coated; bowels open.

June 19th.—The knee was less painful, but more swollen, and the wound discharged freely. Temperature 101; pulse 102; tongue moist and clean; appetite fairly good. Poultice to be applied to knee; the wound to be syringed with carbolic lotion.

20th.—The knee was much easier, but the redness had extended up the inner side of the thigh, and there was a swollen gland in the left groin; the wound discharged fetid pus, which escaped freely.

21st.—The discharge from the wound on pressure was very considerable; at first there was fetid pus mixed with air, and then some turbid straw-coloured fluid escaped, and lastly some thinner pus; about three-quarters of an ordinary probe could be passed into the wound in the direction of the inner condyle; the knee was much swollen and tender on pressure; the redness had not extended; tongue moist but coated; no appetite for solid food; bowels open. Temperature 100°; pulse 114.

22nd.—The knee was very tender to the touch; on pressure there was a very copious discharge of olive-yellow pus from the wound. Temperature 102°; pulse 120; tongue furred. Ordered to take thirty drops of aromatic spirits of ammonia in an effervescing mixture every four hours. Pressure to be applied to the knee by means of an elastic band.

23rd.—The leg looked much quieter, all redness had gone, and the swelling was less.

He then improved slightly for some days, but on July 6th his condition was not so favourable. There was much more swelling of the knee and the lower part of the thigh; the joint was tense, and there was a copious discharge of dark blood on pressure. The patient suffered excessive pain, and had two opiate draughts during the night. Pulse 120; temperature 102·8°.

On July 7th Mr. Holthouse made a counter opening below the knee over the inner head of the tibia, the tissues on the inner side of the knee being found to be extensively separated.

July 8th.—The leg was easier and the swelling was less, but there was a very copious discharge of fetid pus and blood mixed with air from both openings. Temperature 102·2°; pulse 92.

11th.—Temperature 103°; pulse 120. An erysipelatous redness, with great heat, had attacked the face. There was also a blush over the left knee just above the lower opening, which was filled with a shreddy slough. The discharge from the upper opening was very profuse, thin, and fetid, and mixed with air. The openings were well syringed out twice daily with carbolic acid and warm water (one to sixty). The back splint, which had been removed for the last four days, was reapplied this morning.

12th.—The erysipelas of the face had extended to the forehead. Castor oil and collodion applied. Temperature 102°; pulse 108. No change in the leg. At 12.30 o'clock the patient complained of a chilly sensation passing through the body from head to foot, but the temperature taken shortly afterwards showed no rise. The mind is not so clear.

13th.—Had a good night after a dose of opium; no recurrence of chilliness. Mind clear. The erysipelatous attack had subsided from the face, but there was some tenderness of the scalp. Patches of redness about the knee. Copious discharge of healthier-looking pus from the upper opening. No tenderness of the thigh; œdema of foot and ankle; no alteration in the temperature of foot. There was pulsation in the dorsal artery of the foot, but that of posterior tibial was doubtful. Temperature at 11 A.M. 100·8°; pulse 114; tongue moist.

14th.—Temperature 99·2°; pulse 102. The patient wandered last night, but slept after an opiate draught. All redness of skin had disappeared. The discharge from the leg was less; the swelling also was less, and the joint looked quieter.

17th.—Another incision was made to-day on the inner side and above the knee; two drainage tubes were passed in at the original wound and across to each opening. The patient's general condition remained the same.

22nd.—The limb was put on a M'Intyre's splint to maintain a straighter position and to facilitate drainage. Fluctuation on the outer side and below the knee necessitated another incision. There was a large bedsore over the sacrum and the posterior part of the left crista ilii. Slough not yet separated.

27th.—Continued in much the same state. There was pallor and emaciation, but the appetite had slightly improved. To-day a small opening was found in the ham, with copious purulent and fetid discharge. All splints were removed, and the limb was left on a Salter's swing.

28th.—Temperature 100°; pulse 120; tongue moist. This afternoon the patient was put under the influence of chloroform for examination as to the condition of the knee-joint, which was found to be disorganised, and the discharge from it profuse and offensive. The patient was evidently losing ground, and had a large bedsore. Under these circumstances amputation was deemed advisable, and was performed by Mr. Holthouse by antero-posterior flaps. The patient was very faint after the operation, but soon rallied. Ligatures were applied, and the flaps were brought together at once with sutures; water-dressing was lightly adjusted, and four ounces of brandy were ordered.

29th.—Had a good night after the opiate. The patient was drowsy and weak, but was free from pain. Pulse 126; temperature 101·5°; tongue moist. The dressings have not been disturbed.

31st.—Slept for eight hours last night after an opiate draught. Ate an egg for breakfast, and looked forward to a chop for dinner. Tongue moist and clean; pulse 120; temperature 101·6°. The stump, which was dressed this morning with carbolic oil, looked quiet, and there was slight purulent discharge.

Aug. 1st.—The patient was in better spirits, and looked better. Temperature 102·2°; stump quiet; discharge moderate and healthy; no burrowing. An elastic bandage was applied lightly to the thigh to prevent any gravitation of the discharge towards the trunk.

2nd.—Temperature 103·8°; pulse 132. Tongue moist and clean; bowels open; stump doing well; the patient had an egg for breakfast.

5th.—Not so well since last evening; wandering in night; very pale and chilly. Temperature at 11 A.M., 103°; pulse 144, weak. To have six ounces of brandy and a bottle of champagne; ordered ten grains of the citrate of quinine and iron daily, and a morphia draught at night.

6th.—Great pallor; lips white; but patient was less prostrate than yesterday, and felt better. Pulse 126; temperature 99·8°.

7th.—Nurse reported that at 4.15 P.M. yesterday the patient became black at the mouth and vomited. At 11 A.M. he was trembling. Pulse 150, very weak; temperature 104°. Scarcely any consciousness. He gradually sank, and died at 4.40 A.M. on August 9th.

The leg was examined by Mr. Davy the day after removal. After a long search a small conical bullet was found opposite the wound of entry, in the soft tissues on the outer side of the thigh. It had entered at the inner side, passed round the back of the femur in a horseshoe direction, and had perforated the synovial membrane in two places in passing through it, and had finally lodged itself in the vastus externus muscle.

MIDDLESEX HOSPITAL.

CASE EXEMPLIFYING THE DIAGNOSIS AND TREATMENT OF SOME FORMS OF UTERINE HÆMORRHAGE.

(Under the care of Dr. ARTHUR W. EDIS.)

Menorrhagia; morbus Brightii; death. — M. C——, aged twenty-nine; married five years; sterile. When first seen on the 22nd of February, 1873, she had been losing blood per vaginam on and off since the 1st of January. At times the loss was profuse, clotted, unattended by pain. The patient was of medium stature, plethoric, irritable, nervous, with a foul tongue, and offensive breath, with the peculiar sweetish characteristic odour of those who indulge habitually in excess of alcohol. The bowels were usually confined, and the patient had frequent headaches and an irritable cough, and complained much of numbness in the thighs. On examination, the uterus seemed to be normal in bulk, consistence, and position, the uterine sound passing three inches. Dark semi-coagulated blood was seen to be exuding from the os. The cavity of the uterus was swabbed out with a strong solution of nitrate of silver, with the idea of checking the immoderate flow. One-drachm doses of the liquid extract of the major vinca were prescribed every four hours, together with a strong aperient. The patient was ordered to remain in the recumbent position, to syringe per vaginam twice daily with cold water, and to diminish considerably the amount of alcohol taken. The hæmorrhage lessened very materially, and her general condition improved.

On March 1st a diuretic mixture, consisting of tincture of digitalis, acetate and citrate of potash, with syrup of squills, was ordered; and the hæmorrhage, after another application of the nitrate, ceased entirely.

March 13th.—The hæmorrhage returned. As there was aching pain over the loins, fulness of the head, and other symptoms usually present when the catamenia appeared, it was regarded as the normal monthly period, and no local treatment was resorted to.

16th.—The hæmorrhage ceased, and her condition generally became much improved.

Having explained to her the importance of giving up stimulants, she lessened the amount considerably, and progressed fairly until the next catamenial period.

April 18th.—She had been very ill for a week, complaining of numbness in the legs, pains in her joints, extreme nervousness and restlessness, and inability to stand or walk. She was very hysterical. The bowels had again become confined, and the urine was scanty and high-coloured; on examination it was found to be highly albuminous. Diuretics and saline aperients were prescribed.

From this date the nervous symptoms increased. She became exceedingly hysterical and excited; one day complaining of being blind with one eye (the pupil acted perfectly on exposure to light), then of her mouth being sore, then of pains all over, though when her attention was diverted she bore pressure without flinching.

On April 26th, the pulse was 102; temperature 99·3° F. She screamed violently at times, without any apparent exciting cause. Cerebral symptoms rapidly developed themselves; there was marked strabismus; the eyelids remained unclosed, and a thick, purulent secretion accumulated in the corners; she dozed in a semi-conscious state, screaming at intervals, but answered rationally when spoken to.

On the 27th the pulse was 144, very feeble; temperature 100°; tongue and buccal mucous membrane covered with aphthæ, the former dry and brown in the centre, red and sodden at the edges. The urine, not being passed voluntarily, was drawn off; it measured twelve ounces; specific gravity 1035; clear when warm, becoming turbid on cooling; on boiling it deposited one-tenth albumen; motions passed under her.

From this time the symptoms increased in severity. She became unconscious, gradually passing into coma. The pupils were equal and responded to light. The urine was almost entirely suppressed, one ounce being drawn off by the catheter, thick, turbid, and highly albuminous. The breathing became much oppressed; the chest loaded with mucus; and she gradually sank, and died in the evening of the 28th, ten days after the urgent symptoms commenced.

No post-mortem was allowed; but the history of the case points very clearly to granular degeneration of the kidneys, and the case is recorded as exemplifying a cause of menorrhagia too frequently overlooked. The patient had been addicted to spirit-drinking for some years past. Frequent attempts had been made to check the menorrhagia by ergot, gallic and sulphuric acids, iron, &c.; but the cause of the malady had been quite overlooked, and not recognised.

BRISTOL GENERAL HOSPITAL.

RENAL ABSCESSES FROM CALCULI.

FOR the following notes we are indebted to Mr. Thomas Elliott, M.B., house-surgeon.

Rosina H——, aged nineteen, was admitted on March 25th. Illness commenced four days ago with a rigor and pain in the left lumbar region. Two years ago she had a similar attack to the present. Has never had scarlet fever or dropsy. On admission the body was greatly wasted; face expressive of much suffering; pulse feeble; no vomiting. The patient complained of intense pain near the crest of the left ilium. There was no abdominal tenderness, except in the region of the pain. No pain or tenderness over the right kidney. There was frequent desire to make water. Urine contained blood, albumen, and pus, and had a fetid odour. No casts to be seen under the microscope; only blood and pus-cells.

March 27th.—Still complains of pain, which, she says, is of a dragging kind.

30th.—Remained in much the same state till about 3 P.M. to-day, when she suddenly became much worse and died.

Autopsy.—Body greatly emaciated. On opening the abdomen, and after removal of the intestines, a large fluctuating tumour was seen in the left lumbar region representing the kidney, and in the right lumbar region another tumour, but much smaller, representing the right kidney. From both these tumours, the ureters, considerably enlarged, emerged. The left kidney weighed 27 oz., and resembled on section a multilocular cyst, filled with fetid sanious pus. Its substance was totally disorganised, the cortical portion being reduced to a thin membrane. One or two small calculi were seen floating about, whilst a calculus, larger than a cherry-stone, occluded the commencement of the ureter. The right kidney weighed 6 oz. Here, too, almost the same condition existed. A small calculus was also found blocking the commencement of the ureter. The bladder weighed 2 oz., and was empty and contracted, and tolerably healthy. There was nothing particular about the other organs. The brain was not examined.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE meeting of this Society on the 10th instant—Mr. White Cooper in the chair—was occupied by an able and elaborate paper by Mr. SAMUEL WEST, B.A., Radcliffe Travelling Fellow, upon the subject of the Elimination of Urea in certain diseases. The subject was very ably worked out by the author, who employed a new method for the estimation of the amount of urea, the apparatus for which was exhibited, and its mode of employment demonstrated at the close of the meeting. This method has been described by Mr. West in a paper read by him in conjunction with Dr. Russell before the Chemical Society, and a full account of it will be found in the journal of that Society for August. It is based upon the reaction of urea with hypobromite of soda, in which the urea is decomposed into carbonic acid and nitrogen. The decomposition is effected in a very ingenious apparatus devised by Mr. West, in which a solution of the hypobromite in caustic soda is allowed to mix with a given quantity of urine in a glass tube fixed into the bottom of a pneumatic trough; the reaction takes place very rapidly, and of the gases evolved the carbonic acid is absorbed by the caustic soda solution, whilst the nitrogen collected in a graduated tube over water gives the measure of the amount of urea. The method is very simple and rapid, and requires no difficult calculations; and, if it should prove sufficiently accurate, will no doubt greatly facilitate the estimation of urea in everyday practice, especially if, as the author believes, the whole amount of urine need not be collected for examination.

The cases of disease on which the paper was founded included three of pneumonia, four of rheumatic fever, two of Addison's disease, and one of diabetes mellitus. The examination of the urine from day to day gave the following results. In pneumonia the author found that the total volume of the urine was much reduced during the fever, returning to the normal during convalescence, whilst the percentage of urea was always high during the fever, and fell suddenly at its termination. No definite relation, however, could be discovered between the percentage of urea and the temperature, but when there were marked nervous symptoms the percentage was below that observed in the other cases. As an instance of the absence of definite relation, in one case, whilst the temperature was 104·2°, 14·85 grammes of urea were excreted; when at 104·3°, 20·91 grammes; at 104°, 17·5 grammes. The total amount of urea excreted during the fever was below normal in all cases, and was markedly reduced when compared with the nitrogen taken with food. A change of food was also found to influence, almost immediately, the amount of urea. The author suggested, as possible explanations of the apparent disappearance of the nitrogen—first, and most probably,

that it may be retained in the body during the fever, and that a discharge occurs during convalescence, or that it contributes to form the new cell-growth in the lungs; or, secondly, that it may leave the body by the kidneys in some other form than urea, and thus escape estimation. In convalescence, the total urea is at first reduced, but subsequently rises gradually to the normal. A comparison of these cases with others quoted in books led the author to conclude that there must be two sets of cases of pneumonia, in one of which the urea is increased, in the other diminished. In rheumatic fever the total volume of the urine was found to be much reduced, as in pneumonia, but the percentage of urea during the fever was very high, dropping suddenly at its termination, and gradually returning to normal. The great increase in the *total* amount of urea, such as is usually described, was not found in these cases. An alteration of diet, especially when to a more nitrogenous one, was attended with an increase of the amount of urea. In the two cases of Addison's disease both the total volume of urine and the total amount of urea were much reduced, the percentage of urea, however, remaining normal—a condition ascribed by the author to the fact that the emaciation and loss of strength are proportioned to loss of appetite, and there is thus diminished tissue repair rather than increased tissue waste. In the case of diabetes mellitus, the total amount of urine was small for the disease, and the percentage of urea was not found to be above normal; but the total amount of urea was much increased. This increase was not due in this case to an excessive amount of food taken, but probably to increased metamorphosis of tissue. In support of this view the author referred to Schultzen and Riess's experiments on phosphorus poisoning, showing that urea is not the measure of oxidation only, and to Dr. Sydney Ringer's observations, in which a direct relation between the amount of sugar and urea in diabetes was established and their dependence on the nitrogenous elements of the food shown. The author considers that there are probably as many kinds of diabetes as there are factors in its production, and one of them may be self-digestion by pancreatine.

From these observations the author was led to draw the general conclusion, that, owing to the indefinite variations which occur from day to day in the total amount of urea and total amount of urine, very little information of clinical importance can be expected from it. On the other hand, the indications of the greatest value must be sought in the percentage of urea to the urine. Moreover, in disease, all the information which can be derived from the percentage in the total amount of urine can equally well be obtained from the "urina sanguinis," and the necessity of collecting the whole of the urine for twenty-four hours may be thus avoided. We do not know, however, whether a similar relation holds good in health. The percentage of urea during fever in general is stated by the author to be high, and to remain fairly constant whilst the fever lasts, not, however, following the slight variations of temperature, but falling at the end of the fever; and it does not vary with the quantity of the urine. During convalescence there is a gradual retrogressive fall in the first period, followed by a gradual rise, until a mean of 1·5 or 2 per cent. is established. A fairly definite relation was observed between the specific gravity and the percentage of urea. The total amount of urea is either reduced or not in any great excess during the fever, and varies considerably without any known cause, independently also of the temperature, and to a great extent of the diet. These variations in amount seem to depend rather on the variations of the total volume of urine than of the percentage of urea. During convalescence the total amount of urea is often much reduced, and gives a different average at different periods, whilst variations similar to those occurring in the febrile condition, and perhaps due to similar causes, are also observed. From these facts it would appear that urea is not the measure of tissue changes, and in some cases is not in itself sufficient to account even for the nitrogen ingested in the food. The obvious conclusion is that the relations of urea to its sources—namely, the tissues and the food—must be much changed in disease. The apparent loss of urea may be due to the nitrogen being stored up in the body; if so there should be a critical discharge during convalescence; or to its being eliminated by the kidneys in some other form than urea, such as leucine or tyrosine. This latter view is supported in some of the cases quoted by the absence of definite relation between the specific gravity and the percentage of urea.

The paper, of which the above gives only a very inadequate idea, was illustrated by numerous tables giving the temperature, amount of urine, and urea daily in the cases referred to. After the usual vote of thanks to the author, Dr. DRYSDALE made some inquiries as to the method of analysis, which was subsequently demonstrated by the author.—Dr. DICKINSON called attention to the subject of the relation between sugar and urea in diabetes discussed in the paper. He remarked that Dr. Haughton was the first to point out the constant proportion between the amount of urea and sugar. His views, had, however, been misunderstood. There could be no question that the urea was constantly increased in quantity, whilst the quantity of sugar varied greatly, so that there was no proportion between the total urea and the total sugar. But a living man must always make a certain amount of urea, which was usually in the proportion of three grammes to the stone of weight, and might be called *vital* urea. Dr. Haughton's theory was that the change occurring in diabetes consisted in the breaking up of albumen into urea and sugar in the proportion of one of sugar to five of urea. Dr. Dickinson had examined the urine in a great many cases, and had generally found that if the vital urea were deducted in the proportions mentioned, the relative amounts of urea and sugar usually agreed with this rule so long as sugar and starch were excluded from the diet. Dr. Dickinson also stated that in four cases of diabetes insipidus he had found the urea increased in amount.—Mr. WEST made a few remarks in reply, and then showed his process, after which the meeting was adjourned.

ARMY MEDICAL REPORTS.*

[FIRST NOTICE.]

THE fourteenth volume of the Army Medical Departmental Reports for the year 1872 is later than usual in making its appearance, but the volume is a more than commonly good one; indeed, some of the papers are exceptionally good. The primary object of a publication of this kind is to furnish an official record of facts bearing on the health of the army for the information of Parliament, and for the future reference and guidance of those directly concerned in the subject. To the ordinary reader very much of this—embodied as it is in statistical tables, and accompanied only by such short commentaries or statements as are requisite for their elucidation—must of necessity seem dull and uninteresting, but to anyone in search of specific information on certain subjects these volumes are of real value. Another, and, we presume, secondary object, was to make these yearly blue-books a vehicle for the diffusion of medical, surgical, and sanitary knowledge among the members of the service by the publication of contributions of interest from the medical officers themselves. Members of the medical profession in civil life commonly turn to this portion of the volume, and it is from it that the character of the Medical Service, as a scientific body, receives its stamp. In the civil profession there are, no doubt, many incentives, and some of them of an unworthy kind, to writing with a view to publication which do not press upon the medical officers of a public service. This desire to give publicity to one's name, rather than the desire to advance knowledge, is often the main and sufficiently apparent object: an evil from which medical officers are, to do them justice, relatively free. But the good men—the men who really have something to say—receive little or no encouragement, and neither the work done by our medical officers, nor the information they possess, is sufficiently known or appreciated in this country. In Germany, however, they

* Army Medical Department Reports for 1872. Vol. XIV. Harrison and Sons, London, 1874.

always attract attention, and we are just in receipt of a pamphlet, published in that country, epitomising the medical arrangements and conduct of the Ashantee campaign, on both of which the author bestows great and deserved praise; and we learn that a medical officer of the British Service has proved successful among the numerous competitors for the Empress of Germany's prize. It is we think, one of the great misfortunes of the Military Medical Service that the State holds out no reward of any kind for the cultivation of science; and although it should, abstractedly considered, be true that men ought to pursue science simply for its own sake, we all know perfectly well that practically this is not done, or done very exceptionally, and commonly in other directions and by other channels than blue-books. Apart from this reason there are others why there is a lack of what may be termed "go" in official literature generally. This departmental blue-book, for example, comes out annually, and authors must consequently wait a long time before their efforts see the light, during which time they run the risk of being forestalled, or of having their conclusions modified or capable of receiving another rendering by the light of the information which observation and experiment have thrown upon a given subject in the interval. Again, it is alleged, and with a large amount of truth, that the unsettled life of a medical officer, and the almost perennial causes of discontent and irritation which spring up in the department, occupy his thoughts and time in other matters than the progress of medical science. When men have to be so often fighting against what they consider attacks on their rights and privileges, they are not likely to enjoy a frame of mind conducive to quiet observation, nor are they likely to exhibit any striking manifestations of scientific zeal. We would guard ourselves against being thought to be apologising for any shortcomings in the present volume, for it is, as we have said, a very good one; but taking these volumes one with another, the papers do not, in point of number, variety, and character, afford a fair expression of the power of the Medical Department. We are far from thinking of course that writing men are by any means the best, most capable, or useful men in a service. Facility and clearness of composition are often allied with shallow thinking; and fluidity of style is often found to be of low specific gravity when gauged by the amount of new or well-considered matter in it. We think it a mistake, however, that a public service should not hold out some rewards, not for writing of this or any other description by itself, but for good work in the way of scientific observation of any kind, or for the exhibition of professional ability. It is quite right that military rewards should be preferentially bestowed for military medical services rendered under circumstances of danger, difficulty, or responsibility; but the medical is a scientific service, and to maintain its character as such additional stimuli are required. We will not reiterate what has been said before in the pages of THE LANCET as to the number of pursuits, apart from those of a purely professional character, open to medical officers; we shall content ourselves by saying that we should welcome a longer array of names as contributors to these volumes, and we cannot help thinking that the influence and power of the department would be increased by the publication of a number of cases and occurrences which must come under their notice, drawn up in a short, clear style, so that the point or points to be advanced or proved are made apparent without being encumbered by the unnecessary details which may be useful enough as a daily record of the progress of a case. Before closing these prefatory remarks, we must honestly say that these departmental volumes contain a mass of information of a really valuable character, and that they are nothing like so well known or appreciated as they deserve to be. Many of the papers bearing on army hygiene, the construction of hospitals and barracks, the water-carriage system of drainage, the dry-earth system, the relation of cubic space and ventilation to health, and especially to pulmonary and epidemic diseases; the prevalence of ophthalmia, its nature, and the conditions favourable to its spread; the etiology of enteric fever in its relations to soil and climate, and to the age and other circumstances of those individuals exposed to its causes, are excellent; and the reports have sometimes contained information that has been far in advance of what existed at the date of its publication. There is one great thing, too, to be said in favour of many of the papers in these Reports. The subjects are discussed in a judicial spirit, and often without reference to any theory, and the reader is left to draw his own conclusions from a record of facts, or from deductions in the form of propositions, which flow naturally out of the evidence adduced. The present is the first volume, by the way, which bears the signature of the new Director-General on its title-page. Conspicuous for its absence is any medical history of the late Ashantee campaign. Besides the statistical reports of the health of the troops serving in the United Kingdom and abroad, and short summaries from the sanitary reports of the various officers in medical charge of stations or corps, the Appendix contains the usual report—and an uncommonly good one it is—on Hygiene for 1873, by Prof. Parkes, of which we shall have more to say hereafter; a very able and elaborate essay, which won the Alexander Prize, by Surgeon Welch, the Assistant-Professor of Pathology at the Army Medical School at Netley, "On the Nature and Varieties of Destructive Lung Disease included under the term Pulmonary Consumption, as seen among soldiers, and the hygienic conditions under which they occur"; as well as another interesting and suggestive essay on the same subject, which contains some new points, by Surgeon Alcock. Taken together, these two papers strike us as very good, the one being to a considerable extent supplementary to the other. The essay announced as having gained the second place, by Surgeon-Major Gore, is not published; its omission is probably to be ascribed to its author's absence on the late expedition to Ashantee. A paper on Dengue, by Surgeon-Major Slaughter, is very well done; a very interesting case of heart disease (which, if we mistake not, has already appeared in our pages) is also excellently described by Surgeon Longhurst. There are, of course, several other papers, but we only pretend to give a brief *résumé* of the contents of the volume for the present.

JAY v. THE GRESHAM LIFE INSURANCE COMPANY.

AT the Court of Queen's Bench, on the 5th inst., before the Lord Chief Justice and Justices Blackburn, Quain, and Archibald, Mr. Digby Seymour, Q.C., with whom were Mr. Waddy, Q.C., and Mr. Mellor, said this was an action tried at Leeds before Mr. Baron Amphlett, when the jury returned a verdict for the plaintiff, damages £3000. The trial lasted six days, and the learned counsel now moved for a rule *nisi*, calling upon the plaintiff to show cause why the verdict should not be set aside, and a new trial granted, on the ground that the verdict was against the evidence, and also misdirection. The plaintiff, in September, 1871, married a widow who had been twice previously married—in 1870 and in 1861. On the 17th October, 1872, the policy on her life in the defendants' office for £3000, which was now disputed, was effected, and on the 10th October, 1873, she died. The Company refused to pay the amount, on the ground that the plaintiff had concealed from them the fact that, at the time he effected the policy, she was addicted to habits of intemperance. A point was also raised that, although the affirmative by the pleas was on the Company, the learned baron ruled that the plaintiff had to begin, whereby it was contended the jury had their minds imbued with the plaintiff's case, and prejudiced against the defendants by the statements of his learned counsel.—Rule granted.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 14, 1874.

THE four gentlemen who have elected to stand for the post of Coroner in place of the late Dr. LANKESTER are—Dr. HARDWICKE, the late deputy coroner for Central Middlesex; Dr. DIPLOCK, the coroner for West Middlesex; Mr. LANGHAM, the deputy coroner for Westminster; and Mr. BOULTON, a solicitor, of good standing in his own profession, but as yet untried as a coroner. Practically, we believe, the contest will lie between Dr. HARDWICKE and Mr. BOULTON; for it is hardly to be presumed that Dr. DIPLOCK will be so unwise as to divide the medical interest and thus systematically endanger the election of a medical coroner; neither, we think, will the candidature of Mr. LANGHAM materially influence an election in which he competes with the tried deputy coroner of the district in which the election is about to take place. We have thus before us once again the old fight of the medical *versus* the legal coroner; and if we would win in this fight, our profession must now and at once concentrate its energies in support of the one medical candidate on which it fixes its choice. Already Mr. BOULTON has formed an active committee, and the rival strength of his profession is in conflict with ours. We should be in a sorry position, socially not less than morally, if we allowed any mere professional feeling or selfish sentiment to influence our conduct in such an issue as that which is now pending. It is no business of ours to ask: Is the coronership a good or a bad thing for the profession of medicine to hold? The question of all others that stands first is plain: Is it for the public good that a medical rather than a legal representative should carry out the duties of the office? It is certain, on the one hand, that there is no officer to whom the public, when it is in doubt and difficulty as to the cause of death, appeals with so much confidence as to the coroner; for in such respect does it hold the decision of the coroner's court, that, though such decision is no ruling at all in the abstract matter of guilt or of innocence, it is often—perhaps too often—accepted as a final verdict. It is as certain, on the other hand, that the public only imperfectly comprehend the duties, the responsibilities, and, if we may so say, the specialities of knowledge demanded in the case of the coroner. If these points were understood, the niggardly comparisons which are made as to the funds required by the coroner for the perfect carrying out of his public duties were never possible. We therefore have a duty before us of asking whether it is for the public good that the coroner should belong to some special profession, and if we find that he should, for that end, be a member of our own profession, it is our further duty, in striving to carry our candidate, to show to the people the reason why we are resolute in such determination. We maintain that no one but an educated medical man can possibly, in these days, carry out the duties of coroner as they are clearly defined. The duties are not legal, or are so lightly legal that nothing but a few technical and fixed rules, which it has been shown a medical coroner can learn in a brief time, are necessary. Let any candid man who sees or hears the work of a coroner's court say to what the evidence all tends. Does it involve nice questions of law? Not a bit of it. The facts sought from the beginning to the end of the inquisition are: How did the person whose dead body now lies before the court die? His death is *possibly* out of the course of nature. Is it so? The difficulty of selection, if difficulty there be, is solved by a reference to the first principles on which the office is based. Suppose there were no such officer as coroner? Suppose to a magistrate or to some other legal authority a plaint were made that a certain man had died under circumstances giving a suspicion of foul play. What would be the natural preliminary act of the magistrate? It would be to ascertain by what cause the dead man lost his life. In the old times, when men were rudely slain by the club, the sword, or the bow, a knight trained to war, and who was by his position also a leech, would naturally be a man well fitted to conduct an inquiry of this preliminary nature for the legal authority. But in these more degenerate days, when murder is reduced to a science, and the murderer seeks his agents in poisons that in their action simulate natural diseases, we have no suspicion that the magistrate, if he had no coroner at his back, would select a soldier to conduct the first inquiries. Less still would he select a lawyer. He would, we feel sure, choose a man who by his life-long studies had acquired a knowledge of all modes and forms of death—a man who was trained to follow the march of death in each of its known courses, and who could detect a divergence from that which is known and already recorded. We have here put an important question in a problematical form. We may put it practically as it is put sometimes for us. It has happened more than once in our time that a man accused of murder, who has passed before all the tribunals, has been condemned by the final court to death. But a lingering doubt has remained on the first and most vital question: Of what did the supposed victim of this condemned man die? Thereupon the Crown has ordered what is virtually a second coroner's inquisition. It has commissioned some person or persons to inquire once more into the cause of death of the killed or slain. Is there an instance in which the Crown, under such emergency, has committed the absurdity of appointing a lawyer to the duty? Would it consider the opinion of the Lord Chancellor himself of any account for such a purpose? We need not give the answer, for the Crown gives it. It appoints some medical man to the duty, and accepts from him a final decision that might have been had at first if in all cases a skilled medical man held the inquisition as to the cause of death.

In the present election we have before us one of our brethren, Dr. HARDWICKE, who by common consent is accepted as the man best deserving our support. His candidature it is the duty of every medical man in the central district to support, not only by his own vote, but by the influence he can bring to bear in his immediate circle on the fate of the election.

MEDICAL men would heartily welcome Professor TYNDALL'S aid in popularising Dr. BUDD'S opinions on the dissemination of typhoid fever if it were not two-edged. His recent letter to *The Times* on the subject is, indeed, chiefly interesting to the profession as an illustration of the manner in which men of high and even scientific education too often treat public questions relating to the prevention of disease. It might have been presumed, from the large and lucid treatment which typhoid fever has received in the daily papers, more especially in the columns of *The Times*, since the illness of the Prince of WALES, that few men, of scientific training at least, had not become tolerably familiar with the views which Professor TYNDALL now seeks to make known, and with the remarkable influence they have exercised upon etiological research and sanitary practice and legislation. It is little complimentary to Dr. BUDD that the learned physicist should betray so little acquaintance with the part which Dr. BUDD'S researches and opinions have played in elucidating the etiology of typhoid fever and in guiding sanitary legislation and practice. It is obvious that, tempted to read Dr. BUDD'S recent work, he has been powerfully influenced by the genius of the writer, and, carried away by an impetuous admiration, the caution of the physical philosopher has been left lagging in the rear. He is unaware of that great hiatus in the book which first made the profession acquainted with the mental wreck which it has to deplore, and which gives to the work so melancholy an interest.

To have had the story of Dr. BUDD'S researches told by Professor TYNDALL at the present time would have been an unqualified gain, if he had possessed a wider knowledge of the subject than that given in Dr. BUDD'S incomplete work —if also he had avoided committing himself to a part in the discussion of the vexed question of the "spontaneous generation" of the disease. Is it possible that the wisdom of the too imaginative tabby in the "Cat's Pilgrimage," learned from bitter experience, has not found its way into the arcanum of the Royal Institution? When the tabby, wearied and disappointed in its search for a higher ideal of life, questioned the owl as to its mode of occupying itself, the owl promptly answered, "With thinking." "But what do you think about?" asked the tabby. "At present," answered the owl, "I am engaged upon the problem whether the egg or the hen came first." "But," sharply answered the tabby, "that is insoluble."

Dr. BUDD'S theory of the mode of dissemination of typhoid fever is best dealt with, both in its scientific and its practical bearings, wholly apart from the question of "spontaneous generation"; and so used, it stands side by side in the greatness of the benefits it has conferred and is still conferring upon the human race with Dr. SNOW'S parallel theory of the mode of dissemination of cholera. It is amazing in this year of grace to have Professor TYNDALL writing that Dr. BUDD'S theory "is sure to occupy the attention of legislators as well as of physicians, and it is therefore desirable to place it in the clearest untechnical light." For the last ten years at least this theory has been the most important and prolific agent in tracing out outbreaks of typhoid fever; it has formed the accepted groundwork of dealing with such outbreaks; and the Legislature acted on the principles of preventive treatment of the disease indicated by the theory so long ago as 1866.

We dissent from Professor TYNDALL when, after giving a summary of the classical case of North Tawton, he observes: "The case here submitted to the reader is not one of medical practice but of common evidence, which does not even require a trained scientific mind to weigh it." What would Professor TYNDALL say if his hearers at the Royal Institution were to confound his masterly explanations of the results of his researches with the researches themselves? Yet that is precisely what he appears to do in this sentence. The "common evidence" here spoken of is the evidence as wrought out after infinite painstaking and inquiry by a scientific medical man—Dr. BUDD, to wit. Professor TYNDALL, in fact, falls into the error which is now exercising such mischievous results from the sanitary policy adopted by the Local Government Board—of believing that, a true or probable theory of causation of disease being made known, its application in actual practice is simply a matter of "common sense." We would suggest to Professor TYNDALL to ask Mr. SIMON to give him an opportunity of accompanying one of his inspectors on an investigation of an outbreak of typhoid. If he will do this, or, if he prefer it, will read some of the reports of Mr. SIMON'S staff on such outbreaks (e. g., Dr. BUCHANAN'S Report on Typhoid in Caius College, Cambridge), he will find that in preventive medicine as in physical science the evidence will not become common until it has been distilled through a trained mind. The Legislature has provided in some measure for this by requiring every sanitary authority to have a medical officer of health.

Again, Professor TYNDALL is unhappy in his application of Dr. BUDD'S rules of disinfection. In reference to these, and to certain results Dr. BUDD believes he obtained by their application, he observes—"Can it be doubted that with sound medical advisers, backed by an intelligent population, an equally rapid destruction of the foe might be accomplished at Over Darwen?" If Professor TYNDALL had communicated with Mr. SIMON, or had read his memorandum on "Disinfection," before giving publicity to this sentence, he would have learned that not only could it be doubted, but that an overwhelming amount of evidence exists that no such confidence can be reposed in the effect of disinfectants in arresting the spread of typhoid fever as he supposes. Disinfection is of value simply as ancillary to other more fundamental measures of prevention. In whatever manner practised, under conditions like those existing at Over Darwen, it is a sham and nothing more. The whole teaching of sanitary experience during the last ten years, and in the full light of Dr. BUDD'S observations, has been to the effect that the spread of typhoid fever can alone be surely limited by the removal of those states of excremental pollution of soil, air, and water which admit of dissemination of the disease. Professor TYNDALL'S observation furnishes the sanitary authority of Over Darwen with another excuse for postponing the much-needed sanitary amelioration of the place. For this reason, as well as for the implied easiness of the untrained mind apprehending, unaided, the etiological significance of the facts which go to

make an outbreak of typhoid fever, we have characterised Professor TYNDALL's letter as two-edged.

WE regret to find that the Metropolitan Sanitary Authorities have not yet come to any satisfactory understanding with the Registrar-General upon the point noticed by us a month ago as being then in dispute—namely, the claim of the London registrars to be paid for the use of their mortality returns by the medical officers of health. As the facts were then before us, we could come to no other conclusion than that the Registrar-General was fully justified in the course he had taken, bearing in mind the position in which he stood towards the London registrars. No doubt the state of things which had arisen was unsatisfactory; but the blame for it seemed clearly to rest elsewhere than upon the Registrar-General.

There are evidently persons who hold that an official, no matter whether he be at the head of a naval, a military, or a civil department of administration, must in the very nature of things be always in the wrong when he chances to be at issue with any individual or section (however small) of the public. But this is a sort of notion which is, or ought to be, entirely foreign to the principles of journalism; the honour and influence of the press being, in our view, alike dependent upon the universal conviction that even-handed justice will invariably be dealt to all who appear at its bar. It is on this ground alone that we object to the attempt now being made in certain quarters to hold the Registrar-General up to censure, by a partial and distorted representation of what he has done. It is sought, for example, to make out that he has suddenly stopped the issue of weekly returns of mortality to the metropolitan health officers, who are thereby, "in the midst of an extending epidemic of scarlet fever, deprived of their most reliable source of information in regard to the localities in which the disease prevails." From this partial stand-point it is easy, no doubt, to go on to talk of his having "placed a barrier" in the way of the performance of their duties by the health officers; of his having roused a "spirit of indignation in the vestries" (save the mark!); and of bringing the weight of a superior authority down upon him, and so, we suppose, forcing him to eat humble pie before the vestries.

Never was there a clearer case of "darkening of counsel with words without knowledge," to put the matter in its mildest form. It is by the vestries themselves and not by the Registrar-General that the health officers are deprived of these mortality returns. He is perfectly willing that they should continue to have them; but how is it supposed that he can require the registrars in Lambeth district to make returns for him subsequently to hand over *gratuitously* to the Lambeth sanitary authority, while in the adjacent Croydon district the sanitary authority is bound by law to pay the registrars for such returns? By the Registration Act of 1874 the principle is distinctly laid down, that whenever registrars of deaths are required to furnish returns for the use of a sanitary authority, such authority must remunerate the registrars upon a scale fixed by the Act. In the face of this enactment it is absurd to ask the Registrar-General, on his own responsibility, to draw a line between the metropolitan and provincial registrars, to the manifest pecuniary disadvantage of the former. He would in all probability lose many of his best London officers if he attempted so unjust a thing.

Then, as to the "sudden withdrawal" of the returns at a time when scarlet fever is epidemic, no doubt that is an unfortunate coincidence; but when it is suggested that this was designedly done, the bounds of fair criticism seem to us to be overstepped. There is not a particle of evidence to sustain so odious an imputation. On the contrary, there is the fact that the Registrar-General communicated to the London health officers in April last his views as to the claim of the registrars to be paid for the returns; while in June he gave all the London vestries or district boards notice that they must be prepared to pay for the returns supplied to their medical officers, or else the returns would be discontinued. And it was not until he had received absolute refusals to entertain his propositions, from the greater part of the vestries and boards, that he stopped the issue of the returns *to those health officers whose vestries objected to pay*; in the cases where his proposals were accepted *the returns continue to be sent.*

As to the wild talk in some of the vestries about inducing Mr. SCLATER-BOOTH to override the Registrar-General's authority, all we can say is that, if such an attempt be made, we hope it will meet with the success it deserves. It is apparently forgotten that for the Act of 1874, which gave the registrars a legal claim to payment for mortality returns, Mr. SCLATER-BOOTH is himself responsible.

The truth is that the Registrar-General ought never to have been mixed up at all with this question of supplying mortality returns to the London health officers. Officially he has no relations with the sanitary authorities of London or of the country, or with their health officers; nor has it ever in any shape formed part of his duty to provide them with means for carrying on their work. Consequently it was a pure act of grace on his part when some years ago he yielded to the solicitations of the London health officers and consented to place at their disposal the weekly returns of deaths made for his use by the registrars within the metropolitan limits. The effect of this arrangement has simply been to enable the vestries to shirk their obvious duty of providing information at first hand for the use of their health officers; and now, when they are required to meet their responsibilities, instead of thanking him for past favours, they turn round and abuse the Registrar-General. It is quite clear to us, on all grounds, that it is not desirable, in the interests of either party, that the exceptional and irregular relations which have grown up between the London health officers and the Registrar-General should be continued. At any rate, so far as the health officers are concerned, the letter which we printed last week from Mr. BUTTERFIELD, registrar of one of the largest sub-districts in London, shows that a change ought to be made. For we see that, whereas by direct communication with the registrar the health officer obtained his week's returns on the Saturday made up to date, when the returns were supplied from Somerset House they did not reach the health officer until three or four days after date. In this respect the London health officers have been decidedly at a disadvantage by comparison with many of

their provincial *confrères*, and the present difficulty between vestrydom and the Registrar-General ought to be hailed as an opportunity of putting an end to this anomaly. Looked at in this light, it appears to us that the health officers should gain rather than lose by the course the Registrar-General has taken.

THE present state of our public medical services is most unsatisfactory. We all know what it is in the navy; and the amount of discontent in the Army Medical Service is both great and unmistakable. It finds expression in journals, lay and medical, in letters, and still more, perhaps, in the conversation of the medical officers themselves. The articles in the Indian papers are but the echo of those that have appeared in this country. It cannot be a matter of surprise to the members of the late Government, at any rate, if the state of things be worse now than it has been for some years, and if the dissatisfaction has of late been growing deeper and more widespread. The air is alive with rumours as to the intention of the present War Minister to examine into the cause of the condition of the medical service; and we can only hope that he will not be guided by the counsels of those who have little knowledge of, and less sympathy with, anything medical; but that he will seek the aid of men of experience and of those who know what are the real interests of the service, and what is due to it. All the present dissatisfaction is not the growth of yesterday, notwithstanding its rapid development of late; and it is not to be overcome by the adoption of some present palliative, some process of tinkering, or some mere policy of expediency. The medical services of this country have never received the consideration they deserve. The position accorded at one time to that of the army, after a long and strenuous struggle, was undermined almost as soon as it came into existence. The medical service has had to contend with the dual administration of War Office and Horse Guards; and medical officers regard themselves as the victims of a military prejudice and a parsimonious policy. If anyone desires to obtain an impartial view of the present condition of the department, as regards the position and emoluments, actual and prospective, of the medical officers as compared with what these were a quarter of a century back, just before the Crimean war, and three quarters of a century ago, under the Warrant of 1804, let him consult the article by DR. DE CHAUMONT, as passionless as a production based entirely on figures can be, in the last number of the *Edinburgh Medical Journal*. Considering the relatively high rate of mortality among medical officers, the risks to health incurred by them, the expenses of army life, with its frequent moves, mess contributions and subscriptions, and the increased expenditure of time and money now incurred in a medical education to fit a man for the post, it can scarcely be averred that the army has kept pace with the other sources of employment open to medical men. Committees have occasionally been appointed and representations, on matters that surely need never have arisen under more equitable and effective management, have been made from time to time; but whatever is done is done so ineffectually as only to allay the prominent discontent of the moment. No attempt has been made, as it seems to us, to examine thoroughly into the state of the department and settle its organisation, once and for all, on a firm and well-defined basis. Take the late change of organisation. The existing Government doubtless has the right, as well as the power, to lay down its own system; but what happened? It was frankly admitted to be an unpopular measure by those who advocated it; but, had it been the reverse, no better course could have been adopted than that which was taken to wreck it. The retrospective effect of a legislation which should, in equity, have been prospective; the arbitrary exercise of power in removing at one sweep the names of all medical officers from the regiments to which they had been gazetted; the curtailment of their privileges at the time that new duties were imposed on them; the temporary acceleration of promotion in one grade, with the uncertainty attaching to the intentions of the late War Minister and his haggling about a miserable half-crown a day—not to mention anything else,—were sufficient to awaken the distrust and discontent that followed. What medical officers contend for is this: that their grievances should be fully inquired into and adjusted; that, be the system what it may, their position should be a good and well-defined one; that they should enjoy, relatively, a position in all respects similar to that accorded to the officers of corresponding rank in other scientific branches of the service; that some system should be followed by which pay, promotion, and pensions are so regulated as to be more equably distributed; and that when warrants are once published they should be rigidly adhered to. For a time, after the publication of the Royal Warrant of 1858, the Army Medical Service was a popular one, and it had attractions for young medical men; then followed rumours of discontent, alleged breaches of faith, dissatisfaction at the slowness of promotion, and other matters of complaint; and, as Director-General has succeeded Director-General, nothing has been done to place the Medical Service on the footing it should occupy, if it is to be an effective and contented body.

IT is to be hoped that the publicity given to the question of the Boarding-out System in the columns of *The Times* will have the effect of exciting public interest in the case of pauper children. Once a pauper always a pauper is too much the tacit and unexpressed feeling at the root of our present system of treating pauper children. MRS. NASSAU SENIOR'S Report of her investigation of the Condition of Pauper Schools for Girls in England, and of the practical results of the education and training which they afford, is contained in a report recently published by the Local Government Board. As the investigation was undertaken by MRS. NASSAU SENIOR at the request of MR. STANSFELD in January, 1873, and has reference to questions in which the boards of guardians and the public are deeply concerned, it is to be desired that the Report should be published separately and circulated amongst boards of guardians. We sometimes notice that very valuable reports never get out of their official form and connexions, and that in this way they escape the notice of those who have the power to act on their suggestions. MRS. SENIOR wisely admits that the present schools—separate or district—for

pauper children are a great improvement on the workhouse-school system which they have largely superseded. Moreover, she admits that the material which they have to work upon is bad to begin with—bad physically, mentally, and morally. This, however, is clearly only a reason for doing the very best that can be done for the children, especially when we further consider, what she never forgets, that the life before these little ones is one of unusual difficulty and disadvantage. The general result of her investigations is simply this: that the more pauper children are allowed to congregate together, the larger and more promiscuous the aggregation of them, the worse the results; and that the shorter the time during which children are in workhouse schools the better for their after-life and their after-health. Mrs. SENIOR traced and received information about children who had left the district schools in 1871 and 1872—i. e., schools containing the children of two or more unions; about children in separate schools—i. e., schools containing the children of one union only; and about children who had been educated in free schools—i. e., children of a very low class, who, in the event of their parents dying, must have gone to the pauper schools, but who did have the advantage of a home life, such as it was. The number of cases that have been traced in the three classes is, respectively, 245, 245, and 27. Classifying the girls, after this trial of their character, the "good" and "fair" in the district, separate, and free schools respectively were, roughly, 37, 53, 92 per cent. The "unsatisfactory and the bad" were, in the three schools, respectively, 62, 45, 7 per cent. It will be seen that the more intense the "union" element, the worse is the after-history of the children. The sanitary condition of the children is very vividly described by Mrs. SENIOR; but our own pages have of late years been so heavily drawn upon by descriptions of this condition by our Commissioners that we need not "slay the slain." Ophthalmia, itch, chilblains—in one instance gangrene of the feet,—ringworm, and low and strumous condition of the children, has been the general and almost monotonous report. We must be excused therefore for not giving Mrs. SENIOR'S report on this point. But we gladly give her account of the boarded-out children. She says that in the course of her visits she "did not see a single case of ringworm or ophthalmia, and the children, almost without exception, looked strong and thriving and happy." Mr. OLINTHUS J. VIGNOLES, in his letter to *The Times*, magnifying the system of pauper schools, treats the preference for the boarding-out system as if it were confined to "philanthropic ladies," and not shared by any of "our sterner sex." If the "philanthropic ladies" generally have such a basis for their opinions as Mrs. SENIOR and Miss JOANNA HILL have, they can bear much "sterner" opposition than that contained in Mr. VIGNOLES' letter, or even in that of Lord LYTTLETON in *The Times* of November 9th, who thinks, with Mr. FAWCETT, that by paying four or five shillings a week to decent people for the care of these unfortunate children we shall be encouraging pauperism. Mr. VIGNOLES must have great misgivings about this demand for a fair experiment of the boarding-out system proceeding only from women, when Mr. GOSCHEN says he to a great extent shares the views of Miss BREUSSER; when *The Times* endorses Mrs. NASSAU SENIOR'S suggestion that permanent or orphan paupers should be boarded out, unless indeed the staff of the leading journal has been invaded by some clever "girl graduate"; when Sir CHAS. TREVELYAN eulogises the proposal, and clergymen like Mr. FROME say that the boarded-out children in his parish are amongst the best-conducted in it. As for Lord LYTTLETON'S objection, it will not bear examination. Orphan pauper children cannot be responsible for their pauperism. And if by the substitution of a home life for a workhouse life they can be brought to better health, to better conduct, and to greater fitness for the duties of life—and all this is in evidence,—then the interest of the State must be in the boarding-out system. It is inconceivable that anybody should be pauperised by such results gained for four or five shillings per head per week. The very point of the evidence taken on the respective effects of the school and the boarding-out system is that the latter tends to depauperise the children. Can it favour the pauperisation of the decent families to whose care the children are committed? Our imagination is not equal to such a conclusion, and there are no facts to support it. We heartily join the philanthropic ladies in demanding a fair trial for the boarding-out system.

Medical Annotations.

"Ne quid nimis."

THE GENERAL MEDICAL COUNCIL.

THE Executive Committee of the General Medical Council met on the 22nd of October, Dr. Acland in the chair. One or two questions of interest came under the consideration of the Committee. By a letter from the Home Office, the attention of the Council was called to the fact that the Scotch Procurators-Fiscal were very scantily supplied with copies of the Medical Register. It was resolved to remove this complaint. A letter from Dr. Jackson, of Hexham, Northumberland, was read, calling the attention of the Council to the fact that the Local Government Board had refused to accept a certificate as to the necessity for amputation except from a M.R.C.S. Eng., thereby causing great inconvenience and pecuniary loss, and also loss of status, to Scotch graduates and licentiates. Dr. Hawkins, as Registrar, had written to the Secretary of the Local Government Board a letter of characteristically gentle suggestion—not to say remonstrance; but the only satisfaction contained in the reply of the Assistant-Secretary of the Board was to the effect that when the Board revise the General Consolidated Order, which they probably will do before long, they would take care that the point raised should be duly considered. We knew that the Local Government Board was rather ancient in some of its views; but we did not think it was so antiquated in its notions of medical qualification. As it is, we venture to suggest to the Board that in refusing to recognise the licence of the Faculty of Physicians and Surgeons as a qualification in Surgery it was unmindful of its own circular of the 3rd January, 1860, accompanying the General Order as to the qualifications of medical officers. If the Local Government Board thinks it necessary to show its superiority to the law of the land on medical qualification, it will not, perhaps, persist in acting contrary to its own circular. By another letter from the Home Office, enclosing one from J. W. Roe, M.D., coroner for Ellesmere, the Council's attention was drawn to the fact that at an inquest on the body of Samuel Yonde, who died

from taking laudanum sold to him by one Thomas Twemlow, the said Twemlow swore that he was a member of the Royal College of Surgeons of England, and that Dr. Roe had ascertained from the secretary of the College that Thomas Twemlow is not a member of the said College. The President agreed to communicate with the solicitor to the General Council respecting the case. The case of an advertising registered practitioner in the north of Scotland was brought under the notice of the Council in a letter, which letter was referred to the Royal College of Surgeons of England and the Society of Apothecaries of London, from whom the advertiser received his qualifications. It was resolved that licensing bodies whose examinations had not been visited should next be visited—viz., in England, the Royal College of Physicians, the Royal College of Surgeons, the University of Oxford, the University of Cambridge, the University of Durham, the University of London; in Scotland, the Universities of Aberdeen, Edinburgh, and St. Andrews; in Ireland, the King and Queen's College of Physicians, the Apothecaries' Hall, and the University of Dublin.

THE NAVAL MEDICAL SERVICE.

THE retirement of Dr. John Davidson, C.B., Inspector-General of Hospitals and Fleets, appeared in the *Gazette* of last week. This step, we regret to learn, has been caused by an impaired state of health, brought on in the discharge of duty. Deputy Inspector Mason, now serving at Malta, has, we understand, been promoted to the vacancy, an advancement to which he is justly entitled by his long and excellent services in Jamaica, Haslar, and Malta hospitals. Dr. Davidson thus closes an active career in her Majesty's naval service of a highly honourable character. Having by previous good service in the Indian Archipelago, and especially at Ascension, attracted the favourable notice of his superiors, he was selected at the outbreak of the Russian war to take charge of the naval hospital at Therapia. To his energy and administrative ability in discharging the duties of this responsible position must be ascribed the efficiency which that hospital attained at a time and place when success was the exception and not the rule of hospital management. The subsequent fields of his professional exertions, if more peaceful, have been no less important. After discharging for years with ability a responsible position at Haslar, he was promoted to his present rank, and placed in charge successively of Greenwich and Plymouth hospitals; and we have reason to believe that Dr. Davidson was compelled to decline the Director-Generalship, on the ground of the state of his health, in 1869. In appreciation of his eminent services, Dr. Davidson had recently conferred upon him the distinction of Honorary Physician to the Queen, and this, with the Companionship of the Bath, acquired some years ago, forms the sum of his titular honours. The question now is, Should they stop here? Without in the smallest degree reflecting invidiously on the liberality of the Admiralty in regard to this officer hitherto, we think that the time has come when something final might be awarded to him. The honour of knighthood has been of rare occurrence of late years amongst naval medical officers. There are those now serving and who have recently served whose claims are at least as strong as many of their predecessors who have been so honoured, and we cannot but think that the Naval Medical Service would in every way be benefited and dignified by having more knightly honours conferred upon its leading members. As it is, it seems to be restricted to the chief of the department by virtue of his office, and as the retention of that office for an indefinite period has recently been made the rule, the chance of attaining to such honours is small indeed. In our way of thinking, a better mode might be adopted by the authorities than has of late years guided them in this matter. Honours must not be too long withheld. To fulfil their *raison d'être* they should be conferred whilst their recipient can take some pride in wearing them, not postponed, as in the instance of a late eminent officer, whose weight of years transformed, in the eyes of his friends, the honour into an irony. But whatever the course the Admiralty may take to show their appreciation of Dr. Davidson's merits, we are quite sure that his brother officers and the naval circles generally will hail with pleasure the official recognition of his long and eminent services.

A PAINFUL CONTRAST.

IN our last issue we published the usual half-yearly statement of the "Society for the Relief of Widows and Orphans of Medical Men," showing that the receipts exceed the expenditure by some two hundred pounds; and in another column an appeal on behalf of the widow and orphans of a deceased medical man left in absolute want. The Society has the means but not the power to help in this and similar cases because the deceased practitioner had not taken the proper precaution of joining the Society and subscribing two guineas annually to it for at least two years before his death. Our object is not to blame this unfortunate gentleman or to prevent funds being collected for his widow and orphans, but to point out how few comparatively of the struggling members of the profession living within the London postal district, and therefore eligible, avail themselves of the opportunity of thus providing for their families. No life assurance at so low a rate can offer anything like the advantages enjoyed under the rules of this Society, which we subjoin:—

"69. The widow of a member who has no certain income or provision, exceeding altogether the yearly value of £50, is eligible to receive, half-yearly in advance, such relief from the Society as the Court of Directors shall determine.

"70. Should the widow of any member receiving relief from this Society marry, she shall cease to receive any grant for herself during coverture, but should she again become a widow, she shall again be eligible to receive relief on a renewal of her application to the Court of Directors, in which case the same course shall be followed as is directed with regard to the original application.

"71. The widow of a member who is left with a child or children under fifteen years of age entirely or in part dependent on her, and whose certain income or provision does not exceed altogether the yearly value of £12 for each child, in addition to the £50 mentioned in bye-law 69, is eligible to receive such additional assistance, half-yearly, in respect of each child under fifteen years of age, as the Court of Directors shall determine; but if such child or children have any provision independent of the mother, such provision must be distinctly stated to the directors in the usual half-yearly declaration of the widow.

"72. Any orphan of a member who shall have lost both parents, and shall have no certain income or provision exceeding the yearly value altogether of £25, is eligible to receive such relief half-yearly, if under fifteen years of age, as the Court of Directors shall determine."

HOSPITAL SUNDAY AND SATURDAY IN LIVERPOOL.

THE *Liverpool Daily Albion* gives a very satisfactory account of the development of Hospital Saturday and Sunday in Liverpool. In the four years of the existence of Hospital Sunday, the sums raised were in the first year £4685 2*s.* 9*d.*, in the second year £6923 3*s.* 11*d.*, in the third year £8124, and this year £8848 0*s.* 4*d.* The increase in the numbers of contributing congregations is equally significant. In the four years the numbers were respectively 195, 239, 250, 275. The income and the requirements of the fifteen institutions become nearly balanced. The ordinary expen-

diture used to amount to £46,531 19s.; the subscriptions (£14,772 17s. 5d.) and the income from investments (£4054 7s. 11d.) amounted only to £18,827 5s. 4d., leaving a deficit of £27,705 8s. 8d. to be met out of the very uncertain sources known as legacies, donations, and earnings. Thanks apparently to the direct and indirect effects of Hospital Sunday, the fifteen charities had a total income of £47,293 3s. 7d. to set against a total expenditure of £46,531 19s. in the year 1873. This should silence those who object to Hospital Sunday as tending to lower other sources of income. Hospital Saturday in Liverpool is also in a state of most active and healthy growth. In the first year £103 13s. 10d. came from 73 workshops; in 1872, £720 3s. from 273 places; in 1873, £1696 11s. 1d. from 605 firms; and this year £2198 14s. from 676 firms. The cost of managing the fund is £2 17s. 10d. per cent. Our Liverpool contemporary contrasts this with the expenses of the Hospital Saturday in London, and, we need not say, is rather proud of the management of his own town. He regards the management of the London Hospital Sunday Fund as instructive chiefly as a warning.

THE PORTSEA UNION.

WE are glad to learn that the arbitrary conduct of the Guardians of the Portsea Union in suspending their medical officer, Dr. Diver, has not received the sanction of the Local Government Board, which, after due investigation, has exonerated that gentleman from blame, and has reinstated him in his office. It may be remembered that a series of charges were brought against Dr. Diver by one of the guardians (who, it is asserted, has a personal *animus* against him) of having made uncalled-for post-mortem examinations, of having removed portions of dead bodies, and of having mutilated them. Dr. Diver had fortunately already secured the permission of the board of guardians to make post-mortem examinations when he thought right, and he has accordingly been acquitted. It is evident from the official correspondence—which from the importance of the case we publish at another page—that the authorities of the Local Government Board disapprove of all post-mortem examinations except when made by order of the coroner. We regret that an official department should so far set itself against the progress of medical knowledge as to curtail the opportunities of its medical officers in verifying their diagnoses, and thus improving their treatment of similar cases in future, but with the existing narrow prejudices of the lower classes it will be well for the medical officers of parochial unions to be on their guard to avoid any infringement of this rule.

THE OLD "DREADNOUGHT."

ALTHOUGH the chief outward and visible sign of usefulness of the Seamen's Hospital Society exists no longer on the Thames, many of our readers knew the old *Dreadnought* well, and the news that she is about to be broken up will awake reminiscences of much useful knowledge acquired, and many pleasant evenings spent, within the old wooden walls. She was the largest floating hospital in the world, and no other ship housed so cosmopolitan a crew as could be found among her 200 patients. Dysentery, scurvy, hepatic diseases in most varieties, and typhoid, were among the medical specialties to be seen on board, and it is probable that Budd gained much of his experience of enteric fever from this ship, which received annually from 60 to 70 cases of the disease. The surgical practice was equally useful, and we believe that the first resection (that of the shoulder) in London was performed by Busk on the *Dreadnought*. A large number of men now teaching in our schools gleaned useful knowledge here, and (an important matter in surgery) learnt how to do little things well. Although, in maintaining a necessary and constant communication with the shore, there were the usual perils of water, including a strong current, a crowded stream, ice, &c., no person engaged directly or indirectly in the business of the ship was ever drowned during the half century that she and her predecessors were moored off Greenwich. The late Dr. Rooke, one of the ablest and kindest of the *Dreadnought's* officers, nobly earned the Humane Society's medal by saving a boy who fell off a barge close at hand. Three patients at different times jumped overboard when in a state of delirium, but all were rescued, and all recovered. There were convivial gatherings now and again, and many rubbers have been lost and won in the snug recesses of the admiral's cabin, used as a mess-room by the medical staff. The *Dreadnought* suffered many blows from without, and was "run into" seriously on several occasions. But the old ship stood it all, and was missed by the bargemen, who made a cushion of her wherewith to cannon off to the opposite shore. There can be no doubt that the managing committee of the Seamen's Hospital Society acted wisely in removing their clients to a home on shore, so that we need not say altogether regretfully, although truly, "Take her for all in all, we shall not look upon her like again."

THE ACADEMY OF MEDICINE OF PARIS.

THIS important body is on the eve of undergoing radical changes, time having rendered its organisation somewhat cumbrous. Founded in 1820, the Academy, up to 1835, had to bear different modifications, and is now divided into eleven sections. These comprise medicine proper, surgery, obstetrics, and allied sciences, making altogether 100 members. A committee lately appointed has reported, by the organ of M. Chauffard, that a complete change is necessary, and proposes to diminish the number of sections, give them new names, and reduce the total of the members from 100 to 60. The discussion will be carried on privately, and it is expected that a good deal of opposition to this scheme will be started. It is agreed on all hands that M. Chauffard's report is a masterpiece as regards diction, lucidity, reasoning, and skilful appreciation of the part which the Academy should take in the progress of science.

SMALL-POX CONVEYED TO JERSEY.

ACCORDING to a correspondent of the *British Press and Jersey Times*, small-pox has been conveyed by a gentleman from Birmingham to Jersey. He was taken ill in a hotel. When the nature of the disease became known, the landlord not unnaturally insisted on his removal from the hotel, and great difficulty was experienced in getting apartments for him. At length one person, more hardy than the rest, took in the sick man. He had had small-pox, and thought it safe to take him in. But the kindness cost him his life: he died of the disease. "From that house," says the writer, "probably originates the outbreak of small-pox. Articles of clothing were sent to the wash; the washerwoman took it, and, living in a court with other families, it became an infected quarter, and has been the means of circulating the disease in other parts of the island." Our readers are aware that Jersey can boast of an entire lawlessness in sanitary matters. There is no Registration Act; there is no Vaccination Act; there is no prohibition of exposure by persons affected; there is no special hospital for the reception of infectious cases. It is a place where the Anti-vaccination League might revel in the luxury of having and conveying small-pox, and in not being vaccinated. Not only so, the authorities would conspire to protect them in

such a course. The writer, on the ground of whose statements we speak, says that the word of the authorities in this matter is "Hush!" This may appear mightily judicious on the part of the authorities, but we doubt whether in the long run such wisdom really answers. The public must come to be chary of visiting a place so full of risks. At any rate, in our opinion, the authorities are morally responsible for the many deaths and cases that have occurred. We advise all persons who have not been recently vaccinated to avoid Jersey for the present season, and we urge upon the intelligent section of the community to call loudly upon the authorities to enact laws that will tend to prevent the spread of disease and death.

CIVIC RESPONSIBILITIES AND PUBLIC HEALTH.

WHEN the Lord Chief Baron received the present and the late Lord Mayors at Westminster on Monday, a graceful and very pertinent allusion was made to the very satisfactory way in which the City has always accomplished the duties that devolve upon it in relation to public health. These observations may recall to the recollection of our readers the circumstance that the City of London appointed the first medical officer of health in England, and that this officer was Mr. Simon, who, under the shadow of Guildhall, was for some years employed in founding principles of sanitary science, not for the City only, but for the metropolis and the United Kingdom, before he migrated from east to west. There is no reason to doubt that the present possessor of the post of medical officer of health to the City of London will do otherwise than maintain its great prestige. The City has also during the last eighteen months consulted, in an eminent degree, the sanitary safety of the entire metropolis, by taking charge of the health of the port, and the Corporation has organised a working staff afloat, the beneficial effects of which have been already felt and acknowledged.

THE FACULTY OF MEDICINE OF VIENNA.

ACCORDING to the *Allg. Wiener Med. Zeit.*, very sad dissensions prevail in the midst of the professors of this Faculty. Billroth seems to be the radical member in the council, and has of late delivered a speech, in which he taxes his colleagues with harbouring unworthy jealousies, and preventing men of eminence, as Cohnheim, for instance, from being appointed to chairs, or at least requested to accept them. He plainly states that the Faculty is in a state of degeneration, and laments over the distressing falling off in the number of students. No doubt the University of Vienna has of late lost eminent professors, such as Hyrtl, Skoda, Oppolzer, &c., but there is plenty of stuff in Germany to replace these eminent men, and we hope that ere long the officials will see their mistake, and at once look round and select the proper men for the vacant chairs.

A CAUTION.

AN accident that recently occurred at St. Bartholomew's Hospital affords another illustration of the impropriety and the danger of leaving poisonous drugs, or, in fact, medicines of any kind, so exposed in the wards that patients may help themselves. In several of the metropolitan hospitals the medicines of the patients are left on a locker at the side of the bed, or are placed on the table in the centre of the ward. As a rule, no trouble or inconvenience arises from this practice, but the consequences may be serious if a delirious or an anxious patient should take an overdose of medicine of a poisonous nature. Still more objectionable than this practice of allowing medicines to lie about is that of leaving poisons, strong acids, and chemical tests, on open shelves, especially when the bottles containing them are promiscuously mixed up with those containing lotions, liniments, and house medicines for the use of the patients. Poisonous liquids should not only be placed in specially prepared bottles, but they should be put in a secure place apart from the medicines of the patients. The hospital authorities cannot too speedily attend to this question, and so arrange matters that accidents cannot occur except from gross carelessness and neglect.

THE HOSPITAL SATURDAY IN LONDON.

IT is intimated that the accounts for this year are at length to be brought to a conclusion, and that sums received after Saturday will be placed to the credit of next year's fund. It is to be hoped that some attempt will be made to analyse the sources of this fund, so that the public may know how much of it comes from the working classes, for whose sake Hospital Saturday was principally instituted. Our contemporary the *Morning Post* devotes a leader to a consideration of the support which the fund has received from them, and says, after contrasting what they have apparently given with what might have been expected from them if every individual relieved at hospitals and dispensaries had subscribed a penny per week—the Hospital Saturday movement seems to show that the working man does not accept his responsibilities. Even if it should appear, as, indeed, it does already appear, that the working-classes do not support the Hospital Saturday, we must attribute the fact rather to want of trust in the management than to want of sympathy with the object.

THE FEVER SEASON OF 1874.

THE medical history of the present year promises to be noteworthy for the unwonted prevalence of certain forms of zymotic disease. In addition to the outbreak of scarlatina, which still threatens to assume serious proportions, we have had an unusually large amount of typhoid fever. At Over Darwen, where the local authorities appear to have done all that lay in their power to invite the occurrence of the epidemic, at Lewes, and other places, severe outbreaks of enteric fever have occurred; and we understand that cases of this fever have of late been making their appearance at various military stations in Ireland. At Darwen Dr. Stevens, it is said, discovered that the drainage from the moors of that place had found its way into the water-storage for the town; and, if such be the fact, the fever epidemic there may be regarded in the light of a case of wholesale water-poisoning. The death-rate from the fever is, we are glad to learn however, somewhat diminishing.

SANITARY NOTES.

THE Northwich Rural Sanitary Authority have decided to allow medical men a fee of half-a-crown for a report of every case of infectious disease that may occur within their district.

The Shropshire Union Canal Company have issued an order prohibiting the working of their boats on Sunday, except under pressing circumstances. With regard to the sanitary condition of these canal boats it is to be remembered that certain sections of the Sanitary Act of 1866 give considerable power to health authorities as to dealing with vessels of any kind, and these clauses are, or should be, utilised by port sanitary authorities. The chief addenda now required are (1) power of detention for the removal of cases of infectious disease, and for the disinfection of the vessel; (2) power to prevent women and children from living on board. In the matter of the cubic space required

for the crew it will be sufficient to take the 9th section of the Merchant Shipping Act of 1867 as a guide. The rules therein indicated work well as regards ocean and coasting vessels, and we commend them to the notice of the Nantwich rural sanitary authority, whose energetic inspector, Mr. Davenport, appears to be working hard in the cause of sanitary science afloat. We may observe that all canal boats that find their way into the Thames are periodically visited and inspected by the officers of the Corporation, and it is reported that the cabins of these boats, though very small, are, as a rule, remarkably clean.

THE PATHOLOGY OF PURPURA HÆMORRHAGICA.

WITH the extension of our knowledge of the intimate pathology of disease we may hope for a corresponding increase of our power of diagnosis and of rational treatment. Any fresh discrimination of forms of disease which have been confused under one title, owing to the mere fact of having one symptom in common, must therefore be welcomed. Dr. B. W. Richardson, whose researches in this direction have been so fruitful, has made another contribution of the kind in the disease known as purpura hæmorrhagica, to which he has applied his observations on the properties of colloids. In a paper read before the Medical Society on the 9th inst., he divides the disease into three classes, distinct in their etiology, diagnosis, and treatment: the *aqueous*, in which the water of the blood is in excess, and the colloids relatively decreased; the *saline*, where some saline substance holds the colloidal fibrin in undue solution; and the *vascular*, where there is a degenerative change in the capillaries, and rupture or transudation is facilitated. Dr. Richardson believes that the character of the eruption varies in these several forms.

A COMMON SENSE SUGGESTION.

IN speaking of the prevalence of bronchitis and phthisis among the troops stationed in certain parts of North Britain, Dr. Barclay, the present head of the Statistical Branch of the War Office, refers to the mild character of the climate of Ayr as compared with that of any of the stations on the east coast of Scotland. As a matter of experience it has been found that regiments from India contain many weakly men who have been exposed to the malarious and other diseases of that climate, and who are very susceptible to pulmonary affections. Dr. Barclay makes the practical suggestion that regiments returning from India should be acclimatised by being detained for a year or two in the south of England before being sent to Scotland; or, in the event of this not being done, that advantage should be taken of the milder climate of Ayr, at which station new and well-constructed barracks exist, for the establishment of a sanatorium for those men who are likely to be injured by being quartered at the colder and more exposed stations in Scotland.

INDIA AND THE HILL STATIONS.

WE are glad to learn, on the authority of the *Civil and Military Gazette* of Simla, that every effort is being made, under the administration of the present Commander-in-Chief, to increase the accommodation for troops at the various hill stations of India. At the present time upwards of 9000 men, or nearly one-sixth of the whole army of India, are stationed there. Of the Bengal Command over 7000 men are quartered in the hills, the remainder being drawn from the Bombay and Madras Commands; and, in addition to the above, there are 712 women and 1367 children at sanitaria in the Bengal Command. This is something like a promising beginning.

ROYAL COLLEGE OF SURGEONS IN IRELAND: REMUNERATION OF MEDICAL OFFICERS OF HEALTH.

A DEPUTATION from the Dublin medical officers of health, in an interview with the Council of this College last week, drew their attention to the miserable remuneration—£10 per annum—allowed them under the recent Act. Prof. Rawdon Macnamara proposed a resolution, which was unanimously adopted, to the effect that the Council felt it to be their duty respectfully to urge upon the Local Government Board the propriety of their taking such steps as would secure for the medical officers of health a scale of remuneration more in accordance with their social and professional status, and with the important and arduous duties expected at their hands.

MEDICAL DISTRICTS IN ISLINGTON.

SOME time ago we directed attention to the great inequality of the medical districts in Islington as regards population, cases, and salary. One medical man for £100 a year has a district covering 1045 acres, with a population of 35,000, and 448 cases in a quarter; while another has a district of 150 acres, a population of 14,826, 99 cases, and the same salary. And there is every intermediate inequality. We are glad to see that the guardians have, on the motion of Mr. Stonelake, appointed a committee to inquire into the extent of the districts. It is impossible that £100 a year can be a fair remuneration to a medical man with 450 cases in a quarter in a district extending over a thousand acres. Fancy an epidemic in such a district! It is easy to say that special services can be requited by a special gift. Unfortunately, after they are over they are soon forgotten, and are supposed to be included in the contract. This was lamentably the case in the recent epidemic of small-pox, when the most loathsome and responsible kind of duty devolved on the medical men. We are glad, therefore, to see that the Islington guardians have so far faced this question as to appoint a committee to settle it. And we wish the Board success in its endeavour to do justice.

EDINBURGH UNIVERSITY CLUB.

THIS Club dined at St. James's Hall on Wednesday last, under the presidency of Dr. Duckworth. The harmony of the evening was conspicuously maintained by Mr. Menzies of Windsor, Dr. Hall, and others, and a very enjoyable evening was spent by the members and their guests, among whom were Dr. Symes Thompson, the Rev. J. Grigg, Mr. Pink, Mr. Johnson Smith, &c.

DUBLIN HOSPITAL SUNDAY.

ON last Sunday sermons were preached in St. Patrick's Cathedral, when upwards of £200 was collected. On the 15th proximo simultaneous collections will be made in a considerable number of churches in Dublin for this charitable object. The committee of distribution, in estimating the work done by the various hospitals during the year, will take into account the number of intern patients, extern midwifery cases, and extern accidents, and the relative cost to the hospitals of those cases.

AN influential meeting of the supporters of Dr. Hardwicke was held on Tuesday evening to support his candidature for the vacant office. Dr. B. W. Richardson, F.R.S., took the chair, and made an able address in favour of medical coronerships, vindicating Dr. Hardwicke's claims for election. We may remind our readers that the election takes place on Tuesday next, the 17th.

DR. T. S. CLOUSTON, Medical Superintendent of the Royal Edinburgh Asylum for the Insane, to which office he was elected in the early part of last year, on the death of Dr. Skae, has just issued a report of the condition of the institution for 1873. The records of the asylum during the sixty years that have elapsed since its first opening show that over 3000 persons have left it with renovated health and restored reason. Last year 228 patients were discharged, of whom 145 were recovered, and 52 more or less relieved from their malady. Dr. Clouston humanely urges that great care and tact should be shown for a time in the treatment of those who have recovered from insanity. Such persons have much to contend with both from within and without, and they should be objects of compassion, sympathy, and kindness. The brain is such an infinitely delicate organ that a tendency to rederangement is readily set up by very slight causes. Of the many cases of relapse that were sent back to the asylum, a considerable portion had been influenced by such causes as the difficulty of obtaining a livelihood, over-indulgence in stimulants, &c.

IT is with much regret we learn from our Indian contemporaries that Deputy Surgeon-General Dr. Buckle, C.B., has been compelled to relinquish his professional and official work in India and return to this country in consequence of the state of his health. It is understood that Dr. Buckle is suffering from a similar affection to that under which that very distinguished officer Sir Henry Tombs laboured; and it is gratifying to learn that the Indian Government mark their sense of respect for, and sympathy with, Dr. Buckle, by allowing a medical officer to accompany him to England. Dr. Buckle, says the *Englishman*, is a medical officer of the finest type of the old Company's service, and his name will long remain a household word on the frontier. Dr. Buckle accompanied the left column of the Lushai force as the senior medical officer, and received the thanks of the Governor-General for his services on that occasion. He was made a C.B. in 1864, and was awarded the good-service pension in 1872.

THE proprietors of a paper mill at a village near Sheffield were last week pretty severely fined, at the instigation of the sanitary authorities of the district, for the non-abatement of a nuisance, which consisted in the discharge of foul water from the mill into a stream running through the village. Fever had broken out on both banks of the stream, and in three months 100 cases of typhoid, of which twenty-four proved fatal, had been reported. For such disgraceful instances of river pollution (and persisted in, be it remembered, after repeated warnings) a money fine appears to be quite inadequate. We would gladly see terms of imprisonment awarded to persons, no matter what their position, who obstinately continue a dangerous nuisance after having been warned of the terrible consequences likely to follow their non-compliance with the provisions of the law.

IT will surprise many members of the profession in this country to be told that elephantiasis Græcorum exists in Canada. According to the *Toronto Globe*, there cannot be any doubt but that in a part of the dominion near the mouth of the Miramichi river, there have been lepers for the last eighty or ninety years. A hospital has for a long time been established for the benefit of the sufferers, and is managed by a parish priest and four nuns. The general opinion in the locality is, that the disease is only hereditary, manifesting itself at certain times, and is not in any way infectious or contagious. The paragraph we have briefly summarised is in every way remarkable. We should like to hear what the Montreal surgeons say about the leprous village.

DR. NACHTIGALL, a distinguished African traveller, is shortly expected at Malta from Egypt. Dr. Nachtigall left Tripoli in 1869, with presents for the Sultan of Wadai. Soon after a report was current that he died in the interior of dysentery. Quite recently, however, Dr. Schweinfurth (whose African experiences must be known to many of our readers) received a telegram from the long missing man, in which he announced his safe arrival at Khartoum, to which place he had penetrated through Kordufan, a territory supposed not to have been hitherto visited by any European. A recital of his wanderings must prove highly interesting and instructive.

IN spite of what has been thundered forth in one or two quarters against cremation, there are evidences that a numerous and important section of the English clergy is favourably disposed to the movement. We understand through a daily paper that the Rev. Brooke Lambert, vicar of Tamworth, at a recent meeting of the Natural History Society of the district, read a very excellent paper on the question. The reverend gentleman adduced a very strong argument in favour of cremation based upon the report to Parliament in 1849 on the sanitary evils arising from graveyards, and successfully disposed of several objections which are commonly urged against the practice.

IN the third or summer quarter of the present year 124,099 deaths were registered in this country. This number included 13,317 referred to diarrhœa, 6081 to scarlet fever, 3308 to different forms of fever, chiefly typhus and typhoid, 2129 to measles, 1838 to whooping-cough, 719 to diphtheria, and 577 to small-pox. The zymotic rate varied considerably in different parts of the country, but was generally, as might be easily predicted, far higher in urban than in rural districts. Although the fatality from diarrhœa appears very severe, it is really less than that of preceding summers. The mortality from scarlatina was higher than in any similar period since the first quarter of 1871.

THE imperative need of providing a public mortuary for Guildford has again been forced upon the attention of the inhabitants of the town. In the case of a recent inquest it transpired that after the corpse had been locked up by the coroner's officer, it was exhibited to at least a score of people. The coroner, after regretting that, as there was no proper building for the reception of dead bodies, he was unable to inflict a fine on anyone, pointed out how easily the course of justice might be frustrated when such unseemly proceedings as that he condemned were possible.

THE profession has just lost an able and highly respected member by the death of Mr. Thomas Chesman, F.R.C.S. Eng., L.S.A., of Sheffield. Mr. Chesman was for many years senior surgeon to the Sheffield Hospital and Dispensary, in the discharge of the duties of which office he acquired an enduring reputation. His loss will be greatly felt in Sheffield.

DR. ALFRED HILL, medical officer of health for Birmingham, has just issued a report of the health of the borough for the quarter ending October 3rd. A serious increase of the death-rate, chiefly attributable to the prevalence of small-pox, scarlet fever, and diarrhœa, has taken place in the town. Dr. Hill again urges the necessity of establishing a hospital for infectious diseases in Birmingham.

THE next Triennial Prize of £300, under the will of the late Sir Astley P. Cooper, Bart., will be awarded to the author of the best essay or treatise on "The Anatomy, Physiology, and Pathology of the Sympathetic Nervous System."

A STORMY discussion took place at a meeting of the St. Pancras Vestry on Wednesday last on the subject of the alleged pollution of the Regent's canal. A report of the Sanitary Committee, affirming that no pollution of the canal injurious to health existed, and recommending that the Vestry take no action in the matter, was almost unanimously carried.

THE mortality in London last week amounted to 1445 deaths, including 10 from measles, 107 from scarlet fever, 10 from diphtheria, 20 from whooping-cough, 39 from different forms of fever, and 27 from diarrhœa. No death from small-pox was registered. It is satisfactory to observe that scarlatina shows signs of abating.

DR. JANEWAY, of New York, suggests the introduction of the hand into the anus and bowel for the removal of viscera from the dead body. He has thus been able, unobserved, to remove the kidneys, portions of the liver, &c.

WE understand that the late bazaar at Brighton, in aid of the funds of the Children's Hospital in the town, realised a sum of £1900.

REPORT
OF
The Lancet Sanitary Commission
ON THE
CONDITION OF EPPING.

ALTHOUGH the climax of dirt and disease, as exhibited in the midst of a so-called civilised population, appears to have been reached at Over Darwen, we have lately been looking a little nearer the metropolis, and have now to describe the condition of a rural sanitary district, which may well serve to point a moral and adorn a tale in the sanitary history of England.

The town and rural sanitary district of Epping, situated between the great and little forests that bear its name, had, at the date of the last census, a population of 3065 persons, inhabiting 605 houses. The district includes Epping, Theydon-Bois, and Theydon-Gurnon; and the town is placed on a high ridge which slopes on one side towards the Lea, and on the other towards the Roding. The London clay underlies the entire district, covered (according to Mr. G. W. Stevenson, C.E.) with a thin stratum of alluvial deposit and fine sand, the upper stratum being in communication with the sand which outcrops at High Beach; so that the water contained in it is carried forward, and supplies, though at a slow rate, the surface wells.

Epping is probably one of the best examples (as it is certainly one of the worst victims) of the results of the last decade in sanitary legislation. It appears from official and other records now before us that what the *Saturday Review* styles "the intelligent minority" is very small in the district under consideration. For, as long ago as 1867, Mr. Joseph Clegg made, under the 29th section of the Sanitary Act of 1866, a formal complaint to the Home Office relative to dirt and disease at Epping, in consequence of which Mr. Arnold Taylor was sent down to hold an official inquiry, and samples of water from eight of the town wells were analysed at the laboratory of the Rivers Commission, and found to be without exception "largely polluted with extraneous matter of animal (and probably human) origin." The result of this inquiry was the formation of a special drainage district of about four square miles in extent as soon as the Sewage Utilisation Act had become law. As the Home Secretary did not possess powers for recovering expenses incurred, section 8 was inserted in the Sanitary Act of 1868. Defects as to borrowing powers, service of orders, &c., were remedied by the insertion of sections 4, 5, and 6 in the Sanitary Loans Act of 1869, and of section 4 in the Sanitary Act of 1870. Meanwhile the authorities of the district, though formally constituted, having continued to sit still and do little or nothing for about two years, the Home Secretary took the affair into his own hands, and appointed Mr. Jabez Church, C.E., to perform the duties of the defaulters. Plans for the supply of water and for the drainage were made. The former consisted of boring an Artesian well through the London clay, which, at the end of June, 1872, was sufficiently completed to allow of a supply of good water at the rate of ten gallons per head per day, and the engines, pumps, water tower, and water mains were all fixed and in working order. The drainage arrangements, which are, we understand, planned on the "separate system," consist of about five and a half miles of piping, carried from the town and district down to two farms, where tanks are placed, and from which the land can be irrigated by simple gravitation, no pumping power being required. Some litigation occurred during the progress of the works, but it suffices to say that things had advanced to the point above described when the Public Health Act of 1872 became law, and the guardians of Epping were constituted the rural sanitary authority of the district. They immediately repudiated the works in progress, and declined to take them over, as being in an unfinished state, although the Local Government Board endeavoured to aid them by extending their borrowing powers for a year, in order to enable them to complete the works. A medical officer of health was appointed, but the office has ceased to exist; and the inspector of nuisances now in office is reported to express an opinion to the effect that ditches and watercourses are, and should be, the natural drains of the country. The small "intelligent minority," represented, as it appears, by Mr. Clegg, has continued, however, to harass the Local Government Board, and, in consequence of a condition of things to be presently described, has enclosed during the past three months numerous items of evidence and detached facts, and in the last communication, dated Oct. 31st, he requested the President to issue a writ of mandamus, compelling the sanitary authority to do its duty. The cesspool system was adopted in the town about twenty years ago. In 1867, 240 cases of enteric fever occurred, the mortality being at the rate of 26 per 1000. During the year ending Sept. 29th, 1873, the death-rate was 27·08 per 1000, 12 of the deaths being attributed to diarrhœa and 7 to fever. The retrospect is complete when we record that Mr. Netten Radcliffe was sent down by Mr. Simon to make special inquiries as to the last epidemic of cholera, that Dr. Buchanan and Mr. Farnall also visited the district last year to confer with the authorities as to hospital accommodation, and that 500 cases of enteric fever have occurred since 1867.

Now for the justification of all this turbulent action, as shown by the present state of affairs. We visited the town at the end of last week, and saw water-works, sewage farm, drains, and outfalls in the condition above described—i.e., waiting to be utilised. Entering a small cottage in the middle of the town, we found a child lying ill with enteric fever, the father having died with the same disease about ten days previously. The floor of the cottage, built originally for some temporary purpose, is literally on the ground, and the walls are of course damp on all sides, and often reeking with moisture. The privy, which opened immediately out of the room, appears to be built over a hole in the ground. There is no water-supply except from the roof, and the mother is compelled to buy or beg what she requires from a neighbour. The house refuse is thrown anywhere. In the next group visited, each cottage is furnished with a small privy *in* the sleeping-room, with the same hole system below. In the yard are pools of stagnant water and a heap of filth, and close at hand a well formed of loose and decaying bricks, which furnishes an intermittent and uncertain supply of surface-water, and into which the contents of the privies must inevitably filter continually. In the third group examined, one privy does duty for three cottages, and close to a fourth, the privy-hole is within two yards of an old surface-well, the contents of

which are used constantly by the inhabitants, and said to be "nice and sparkling." Pigsties are dotted about the neighbourhood. The new main sewer is laid within eight or ten feet of all these cottages. We went into one of the best houses in the middle of the town, in which the drainage arrangements are as perfect as circumstances permit, but, of course, on the cesspool principle. The rain-water pipes from the roofs here act as ventilators; a dark discoloration at all the joints of these pipes, and a very foul smell issuing therefrom, shows the state of things below. All the inmates drink filtered, boiled, or imported water; and a new domestic, some eighteen months since, who neglected this precaution, and drank pump-water *au naturelle*, was seized with enteric fever before she had been in the house three weeks. Some doors off, in the main street, there is an establishment that furnishes employment to from twelve to fifteen persons; but, as no water-supply exists on the premises, the working staff is perforce content with (we presume for drinking purposes) the liberal allowance of two pails a day! At another establishment in the same street the proprietor spends no less than £1 per week in obtaining water for his household. It is neither consoling nor refreshing, under these circumstances, to know that the manufacture of soda-water is carried on in the town; and we are not surprised to learn that a tradesman who keeps petroleum on his premises is, in consequence of the Regent's Canal explosion, likely to have his premium of insurance raised because he has literally no water-supply at hand. The police station in the neighbourhood is furnished with a well and a cesspool in close proximity to each other. Scarlatina and enteric fever are at the present time very rife, and deaths occurred during the hours devoted to our inspection.

Outside the town things are not more cheering. We drove through part of the parishes of Theydon-Bois and Theydon-Garnon, and visited cottages on Coopersale Common, Epping Plain, in Lindsay-street, the Fiddler's Hamlet, and elsewhere. The invariable system (if system it can be called) is as follows:—Wooden privies, some close to the cottages and some at the lower ends of the gardens, are placed over shallow holes that communicate with open ditches at the side or the rear. These ditches are, in dry weather, filled of course with accumulations of filth of all descriptions. When a sharp shower occurs this filth is carried along to the nearest pond or watercourse, and it may be remarked here that a great deal of it finds its way, through a small stream called the Cobbin-brook, into the river Lea, above the intake of the East London Waterworks Company. (The conservators of the Lea served "Epping rural" with an injunction about a year ago.) There are no less than seven miles of these foul ditches in the district, averaging from one to two feet in width and from three to nine inches in depth. The hamlets are so utterly destitute of surface drainage that innumerable foul pools exist by the roadside and close to the cottages; and the paths to some of these cottages were, at the time of our visit, literally steeped in mud, although there had been little or no rain during the previous ten days.

We visited a row of twenty cottages in Epping Plain, for which no water-supply exists. Some accommodate families of eight or nine persons, and a charitable individual in the neighbourhood allows these houses each a pail of water a day. There is the ubiquitous and filthy ditch in the rear, and behind that, at a distance of about six or eight feet, runs the new, unused drain. All the water used in this part of the district is obtained from two or three foul surface wells, or from a stagnant pool at the bottom of the hill, called Knocker's-pond, into which some of the ditch refuse must inevitably find its way. The appearance of this pond, considered with reference to potable water, is repulsive in the extreme, and highly suggestive of very recent sewage contamination. This pond also supplies about a fourth of Epping town. Enteric fever has of course in this, as in other parts, served all classes alike. We were informed by a clergyman who has lived in the place for twenty years, that some seven years ago he lost his wife and child from the disease, and was himself laid up with it for months. He is still, as he showed us, trying to solve the impossible problem of draining his own premises without fouling those of his neighbours, without being befouled by them, and without using the new drain, which runs down the road at a steep incline opposite his house, and over which we stood in talking over this miserable condition of affairs. The union, which is 374 feet above the sea level, is in the same condition as to water-supply, drains into one of the many filthy ponds in the vicinity, and, as an historical episode, we were not surprised to learn that in the cholera epidemic of 1854, 54 out of a total of 102 inmates were attacked.

More material for observation could (as we were informed) have been supplied, but we had seen enough. If any of our readers think this brief record of facts sensational in character, let them take train to Epping and judge for themselves. They will see one of the prettiest districts round London miserably befouled by its own population, although new unused drains run past the very doors of their houses. And they will find no pure water anywhere except at the bottom of the (also unused) Artesian well, the works and tower connected with which stand out conspicuously as a sarcastic memento of sanitary legislation.

THE NEW WING OF THE LONDON HOSPITAL.

THERE is in all probability no institution in the metropolis that has had so practical and steadily increasing a sphere of usefulness as the London Hospital. The original foundation-stone was laid in 1752, and a charter of incorporation was obtained seven years later; in 1814 the south-west, and in 1840 the south-east, wings were built; and in 1866 the opening of the Alexandra wing was inaugurated by the admission into the wards of 865 cholera patients. Since that time ophthalmic wards, a children's medical ward, isolated wards for erysipelas, a new post-mortem department, a steam laundry, gas-cooking apparatus, &c., have been added. The arrangements in case of fire appear to be almost perfect, for the staircases throughout are fireproof, and there are hydrants, hand-engines, hose, and buckets all over the building, a large engine in the garden behind, and a telegraphic communication between the door-keeper's office and the nearest fire brigade station. Gas is used almost exclusively for all cooking purposes, and has, since its introduction, saved the institution more than £500 annually. A coffin-lift has been recently provided, which communicates with all the floors, and is provided with a bier having noiseless wheels, so that the dead are removed quietly, decently, and unobtrusively. Several minor but very important improvements have recently been made in the arrangements of the closets, dust-shoots, &c.; and, in fact, everything appears to have been done to adapt the old part of the building as far as possible to the requirements of the present generation as regards hospital accommodation.

As, however, in 1872 the average daily number of in-patients had increased to 516 (no less than 615 having been at one time located in the wards), the Committee deemed it imperatively necessary to take steps to provide a complement of 200 additional beds, and, an appeal having been made to the public, the Grocers Company liberally subscribed £20,000 of the £100,000 required for the new wing. This wing, which is now rapidly progressing, is situated at the eastern end of the main building, and the plans are so arranged that it will be practically a distinct pavilion of four storeys in height, including the basement floor. This latter will contain the housekeeper's quarters, four small wards, coroner's and witnesses' rooms, and store rooms, and a central corridor leading to the depository for the dead, the catacombs, and the post-mortem theatre at the southern extremity of the wing. It may be here remarked that this group of rooms will be of its kind the most complete in London. The post-mortem theatre, which is already in working order, is very large, admirably fitted with all possible working appliances, and exceedingly well ventilated. It communicates by a small staircase with a room fitted specially for pathological purposes, injectors for minute work, and tables with gas apparatus so arranged as to afford facilities for a large

number of students. The post-mortem theatre has an independent communication with this room, the area, and the depository, and the latter is also furnished with a glass door so constructed that juries can view bodies without going into the room at all, or opening it. The catacombs are very conveniently arranged, and surrounded above with a layer of charcoal. The ground floor will include two large double wards, one of which, running east and west, will be appropriated to children (from 40 to 45 cots), and the other, running north and south, to female erysipelas cases. No communication, however, exists between these two wards, as each has its own entrance and staircase, and will for all practical purposes be treated as a separate establishment. The first floor includes again two large double wards capable of accommodating about 65 beds, both of which will be appropriated to female medical cases, and one of which is provided with a day room at the north-east corner of the building. The second floor will be devoted to male medical cases, and is arranged similarly to that immediately below. The attic floor will accommodate from forty to fifty nurses, with a superficial area for each of about 112 feet, consisting of half-partitioned rooms, each room having a dormer window of its own, with cross ventilation. The drainage, as a matter of absolute necessity, is carried under the building from back to front, the pipes being laid in a solid bed of concrete, and ventilated by tubes fixed along the sides of the building, and opening beyond the chimney stacks. The wards will be warmed by open fireplaces, and ventilated partly by the windows, doors, &c., and also automatically—(i.e., when fires are lighted) by an ingenious contrivance patented by Mr. Jennings of Blackfriars. By this means, air introduced from without is carried upwards by flues placed round, or, in fact, in the chimney, which air is warmed in its progress, and is then sent into the room through openings in the wall close to the ceiling. As these openings are out of reach, and the inlets equally inaccessible, the ventilation cannot be tampered with by the patients, and the system is likely to prove a valuable adjunct to hospital construction. In other parts of the building the extraction principle is maintained, and will be kept up by Howarth's spiral ventilators, which, in the male erysipelas ward, appear to have answered very well indeed, and also by a large upcast at the southern extremity of the building, which will be divided by a fixed diaphragm, and so carry off the air independently from the hospital wing and the post-mortem department. Hot and cold water will be laid on every floor in this, as in other parts of the hospital. It is calculated that each patient will have about 1350 cubic feet of space, which, if the ventilating arrangements work well, ought to be amply sufficient. The closets will be furnished with Baker's Special Disinfecting Apparatus, which was a great success on board the Gold Coast hospital ship *Victor Emanuel*, and has been fitted up in many public institutions.

As the building is, so to speak, in an embryonic state, it would be premature to criticise the arrangements. The wing has been designed by Sir Charles Barry, but many modifications have been made since the original plans were drafted. Messrs. Perry and Sons, of Stratford, are the contractors, and the entire work is being superintended by Mr. Thornhill, the hospital surveyor, to whom, and specially to Mr. Nixon, the house-governor, we are indebted for much information. It is expected that the wing will be ready for the reception of patients about twelve months from this date.

PRESENTATION.

DR. EDWARD SWAIN, the newly-appointed superintendent of the Three Counties Asylum, at Arlesey, Beds, has not been allowed to leave Brookwood Asylum, where he has been assistant medical officer for more than six years, without receiving some evidence of the great regard felt for him by his many friends in the neighbourhood, and by the staff of the asylum. On Monday Dr. Swain was entertained at a dinner and presented with a large and massive silver cup. Dr. George Wilson, medical officer of health for North Warwickshire, presided at the dinner, and G. H. Hall, Esq., county coroner, filled the vice-chair. Twelve medical men and a good sprinkling of the clergy assembled to honour the guest of the evening. After dinner the cup was presented by Dr. Wilson, and then was filled with champagne and passed round. Subsequently, Dr. Brushfield, on behalf of the asylum staff, presented Dr. Swain with a testimonial, consisting of a magnificent dining-room clock, by Dent, vases to match, and a glass épergne and side-glasses for flowers. The clock bore this inscription:—"Presented to Dr. Edward Swain by the entire staff of Brookwood Asylum, as a token of esteem and appreciation of his services during the six and a half years that he has held the appointment of assistant medical officer."

MR. ERICHSEN AND THE PROFESSION IN AMERICA.

To the Editor of THE LANCET.

SIR,—Nothing could have been more gratifying to the national pride of those physicians and surgeons of America temporarily resident here for hospital observation, than the accurate and eloquent address on "American Surgery and American Surgeons," delivered at the University College Hospital, on Monday, November 9th, 1874, by Professor Erichsen. Fidelity of detail of facts as to the architecture of the more modern of those hospitals visited by him, the clear and correct details of hospital treatment, which differs in some essentials from what is pursued here, went to make up a picture as perfect as the pen of a master could make it.

There was throughout the whole the ruddy generous warmth which could only be born of a meeting of genial guest and generous host, while the whole was made quite complete and finished when the kind and complimentary notices of the attentions and courtesies which, as a people, we are only too glad to have the opportunity to extend to every visitor, were closed around as a golden frame to the picture.

Nor can we allow the opportunity to pass thus formally to thank Professor Erichsen, not only for the great honour he has done us in his visit, but for the greater in that he has honoured himself in correctly representing us.

GEO. H. MITCHELL, M.D., New York.
L. C. LANE, M.D., San Francisco.
J. C. HUBBARD, M.D.
DR. WEBSTER, Ohio.
And others.

London, Nov. 11th, 1874.

PARIS.

(*From our own Correspondent.*)

WINTER SESSION OF THE PARIS SCHOOL OF MEDICINE.

ON November 3rd the School of Medicine opened its doors and inaugurated its winter session. Formerly—only a few years ago—this was a day of great ceremony. The professors of the School, clothed in their black and crimson satin robes, gathered in the large amphitheatre to meet the body of students, as well as of professional brethren who chose to attend, and the eulogium of some departed celebrity of the School was delivered by one of the professors. This ceremony had to be done away with on account of the scenes of disorder which, during the latter years of the Empire, took place on the occasion, the students taking advantage of the opportunity to express their feelings aloud against individual professors, or the School, or the Government. Political feeling had a great deal to do with it. The professors of the School, after doing their best on every successive occasion to persuade and soothe the students and re-establish order, took a radical measure, and abolished the ceremony altogether. Now, on the opening day of the School, nothing in the precincts or round about shows that the academic year is being inaugurated. Each professor, at the appointed hour, simply enters the lecture-room and delivers his lecture.

I cannot help thinking that the abolition of the yearly formal opening of the School is a thing to be regretted. It gave a solemn, imposing aspect to the event, perhaps a salutary impulse to both students and professors; it impressed all present on the occasion, and especially, I should

say, the newcomers; it brought masters and pupils together in a body; it enabled the first-year students, just arrived from the provinces, to make acquaintance with the features of their future professors. The panegyric on a departed notability of the profession, setting forth the result of hard work, purpose, and energy, as an example to the young, was not unattended, I am sure, by some good. And, lastly, it may even be argued whether the possibility of some rough criticisms from the crowd of students was entirely a bad thing.

The first day the lecturers were, in succession, Professors Dolbeau, Léon Le Fort, Robin, Wurtz, and Lorain. On the next day Professors Gavarret, Sappey, Chauffard, and M. Fernet (replacing Professor Axenfeld, who is ill) took their turn. The professors of Clinical Medicine and Surgery have also begun their work in the hospitals, Professors Béhier, Sée, Lasègue, and M. Hayem (for Prof. Bouillaud) lecturing on Medicine; and Professors Richet, Gosselin, Verneuil, and Broca on Surgery. Professor Depaul has charge of the Clinique of Accouchements.

Perhaps a list of the subjects selected by some of the professors for their winter teaching may be of interest to my readers. M. Gavarret has especially chosen the phenomena of speaking and hearing; Sappey (Anatomy), the apparatuses of respiration, urinary secretion, and reproduction; Chauffard (General Pathology and Therapeutics), disease in general, pathological classifications, etiological and microscopic characters of various classes of disease in general; Wurtz (Chemistry), the chemistry of digestion; Dolbeau (Surgical Pathology), surgical diseases of regions; Le Fort, therapeutics of bones, joints, and vessels; Lorain, historical study of the pulse; Robin, generation and development of anatomical elements and humours. Besides the above official *cliniques* and lectures, Dr. Roger is to lecture on diseases of children at the Hôpital des Enfants, and Dr. Isambert to lecture and demonstrate with the laryngoscope at Lariboisière.

Whilst on the subject of the School of Medicine, I may just mention that the various reports which have been in circulation here the last few days, touching a change in the person of the dean, are quite groundless. Neither Prof. Depaul nor Prof. Chauffard is to be appointed in the stead of Prof. Wurtz, who retains the deanship.

SPECIAL PAVILION FOR PARTURIENT WOMEN AT THE LYING-IN HOSPITAL.

M. Labrousse, architect of the Paris hospitals, is just giving a finishing touch to a special pavilion which has been built on the grounds of the Maternité, according to a scheme of Dr. Tarnier, and for the special purpose of studying the question of infection amongst puerperal women. The building has been constructed on a plan to avoid any contact amongst its inmates; to isolate not only the patients, but their nurses and other attendants. It is a system of absolute isolation of several patients inhabiting the same pavilion or block of building. In some future letter I will give you a detailed account of the architectural arrangements.

THE SEINE HUTS FOR ASSISTANCE TO THE APPARENTLY DROWNED.

Three wooden huts for aid to the apparently drowned have been constructed on the banks of the Seine, near the bridges of Pont d'Arcole, Pont des Invalides, and Pont des Saints Pères. The increasing number of suicides by drowning has suggested the idea of the construction of these little houses for giving immediate relief to the immersed. They are extremely plain in appearance, but are fitted up inside with all that is necessary for carrying out the purposes for which they have been built, the furniture consisting principally of bedding, hand-barrows, boat-hooks, medicine-chests, &c.

SANITARY ASPECTS OF UTILISATION OF SEWAGE.

In connexion with a demand for funds to carry out the utilisation of sewage in one of the large fields near Paris, an interesting discussion took place at the last meeting of the Municipal Council on the sanitary results of utilisation of sewage. Some of the orators, especially M. Lesage and the son of the famous chemist, M. Raspail, declared that the sewage irrigation of the large fields of Gennevilliers and Asnières, for agricultural purposes, was fraught with danger to the public health. The stench was intolerable, the inhabitants of both localities were strongly opposed to the practice, and if it were carried on there was no doubt that soon a focus of disease and epidemics would be established as was the case in the port of Marseilles and the Gulf of Mexico. It was therefore better, they concluded, that no further grant of money for the extension of the practice should be made until the Sanitary Committee had reported on the subject. This was met by arguments from the Prefect of the Seine and the Chief of the Sewerworks of Paris, who asserted that the practice had been commended, that the works had been carried out by competent men, and that there existed no complaints from the inhabitants as had been stated. So the Council voted the amount demanded.

MEDICAL POLITICS.

Yesterday the large lecture hall of the School of Medicine was crowded to the full when the hour for Professor Chauffard's inaugural lecture drew near, and a great many who had been unable to find place in the room gathered in the large courtyard of the Faculty. When the professor entered the room, accompanied by the dean, he was greeted with a tremendous noise, amongst which the cries of "A bas les Royalistes," "A bas les cléricaux," were loudly prominent. For several minutes the professor was unable to speak, his voice being drowned by the din each time he attempted to make himself heard, and as, notwithstanding the dean's strenuous efforts, nothing would induce the audience to be silent, Mr. Chauffard withdrew in company with the dean. After quoting the cries which were proffered on the occasion, it is scarcely necessary for me to say what was the object of this new manifestation of the students. Mr. Chauffard is accused of being kindly inclined in his opinions to the "throne and the altar," and a report circulated recently as to his possible appointment to the deanship of the school. *Inde iræ.* It is said that a great many other people than students of the school were present on the occasion and took part in the manifestation, so that next time Mr. Chauffard will have to lecture none but medical students provided with their cards will be admitted into the lecture-room.

Paris, Nov. 10th, 1874.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — The following gentlemen passed the primary examination in Anatomy and Physiology on Wednesday last:—

W. H. Weddell, St. Mary's Hospital; Henry Foster, Leeds; M. E. Vaillant, Vienna; Wm. S. Anderson, Glasgow; Jas. S. Orchard, Aberdeen; G. S. K. Bigg and E. E. Price, Middlesex Hospital; F. I. Hicks, F. C. Smith, S. Caffyn, and H. Coates, University College; J. H. Irvin, V. A. Wartenberg, and F. H. Smelt, Manchester; C. Ward and J. E. G. Sykes, London Hospital; A. E. Livsey, Liverpool; P. J. H. Williams, Dublin; H. S. Reynolds, Birmingham; A. W. Renny, Edinburgh; J. H. J. Baillie, A. Brumell, J. W. Ellis, and W. Collingridge, St. Bartholomew's Hospital; W. Farrant, O. T. Slatter, H. W. Ewen, and E. F. Ingram, Guy's Hospital; F. H. H. Guillemard and E. Elsmere, Cambridge; Robert Kains, Toronto; A. M. Phelps, Cambridge and St. Thomas's Hospital

Of the 38 candidates examined, 6 failed to satisfy the Court of Examiners, and were referred for three months' further anatomical and physiological study.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Nov. 5th:—

Kershaw, Joseph, Byrom-street, Manchester.
Newton, Edward Shackfield, Canonbury-park.
Strugnell, Frederick William, Carlton-road, Kilburn.
Tomlin, Robt. Francis, Lewisham-road, Newcross.

The following gentlemen passed the Primary Professional Examination on the same day:—

John Davey Henwood, Charing-cross Hosp.; Alfred Lingard, St. Thomas's Hosp.; Edward Argent Saunders, University College.

MR. JOHN A. LORIMER received a grant of £5 9s. last week from the Local Government Board for the efficient state of vaccination in his district, Farnham, Surrey.

SCHOOL OF PHYSIC, TRINITY COLLEGE, DUBLIN.— The Board of Trinity College have appointed the following examiners, in conjunction with the professors, to conduct the medical examinations in the following subjects:—Materia Medica, Dr. Rawdon Macnamara; Botany, Dr. David Moore; Physics, Rev. J. A. Galbraith.

VACCINATION.—From an appendix to the third annual report of the Local Government Board we learn that at the end of 1873 there were 3092 vaccinators in England, and that 501,189 persons had undergone successful primary vaccination, 470,000 of whom were under one year of age. The births registered were 832,000. It would be interesting to get some information of those children not included in the vaccination returns. No fewer than 25,000 had been revaccinated during the year. The largest number of children ever vaccinated in one year was in 1871, when 693,000 were successfully operated upon.

REVIVAL OF AN OLD MEDICAL SOCIETY.—The Charing-cross Hospital Medical Society, which was founded in 1859, and ceased to exist in 1869, on account of the small number of students at that period being inadequate to the carrying on of the Society, has recently been revived, and held its opening meeting on Wednesday, October 21st. Mr. Hird, F.R.C.S., Dean of the School, and Honorary President of the Society, took the chair. Mr. Hird gave an introductory address, after which the meeting resolved itself into a *conversazione*. Mr. Weiss, Mr. Baker, and Messrs. Mayer and Meltzer kindly lent an interesting and varied collection of instruments, surgical, electrical, and microscopical; and the London Stereoscopic Company contributed a selection of photographic views, &c., which greatly enhanced the pleasure of the evening. The office-bearers for this session are as follows:—Mr. Hird, F.R.C.S., Hon. President; Dr. Cantlie, M.B., C.M., President; Mr. Taylor, M.R.C.S., Vice-President; Mr. W. J. Brookes, Treasurer; Mr. L. Birt, Secretary.

Medical Appointments.

BENNETT, Dr. A. H., has been appointed House-Physician to the Royal Hospital for Diseases of the Chest, City-road.

BLAIR, A., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Ceres, Fifeshire, vice Aitken, deceased.

BOUTFLOWER, A., M.R.C.S.E., has been appointed Medical Officer to the City Gaol, Manchester, vice Fletcher, deceased.

BOYD, J. C., M.B., C.M., has been appointed Superintendent Medical Officer of Health and a Sanitary Officer for the Strabane Rural Sanitary District.

BROOKFIELD, J. S., M.D., M.R.C.S.E., has been appointed Medical Officer for the Emley and Flockton Districts of the Wakefield Union.

BURGESS, F. C., L.R.C.S.I., has been appointed a Sanitary Officer for the Cashel Rural Sanitary District.

CAMERON, H. C., M.D., F.F.P. & S. Glas., has been appointed a Surgeon to the Royal Infirmary, Glasgow, vice Macleod, appointed to the Western Infirmary.

CHARTERIS, M., M.D., L.R.C.S.Ed., has been appointed a Physician to the Royal Infirmary, Glasgow, vice Gairdner, appointed to the Western Infirmary.

COLEMAN, H. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of the Bramley Union Workhouse; also Medical Officer and Public Vaccinator for the Armley District of the Bramley Union, vice A. Rickards, L.R.C.P.L., resigned.

CORMACK, M. P., M.D., has been appointed a Sanitary Officer for the Cashel Rural Sanitary District.

DALY, G. W., M.D., has been appointed Superintendent Medical Officer of Health for the Dunshaughlin Rural Sanitary District.

DE RENZY, T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Arthurstown, Co. Wexford, and Surgeon and Agent to the Coast-guard, vice O'Farrell, resigned.

DONKIN, Dr. H. B., has been appointed a Physician to the Royal Hospital for Diseases of the Chest, City-road, vice Sansom, appointed to the London Hospital.

DUDLEY, R. R., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Kirkoswald No. 1 District of the Penrith Union, vice Taplin, resigned.

DUNLOP, J., M.D., F.F.P. & S. Glas., has been appointed a Surgeon to the Royal Infirmary, Glasgow, vice Buchanan, appointed to the Western Infirmary.

DUSTAN, H., M.R.C.S.E., has been appointed Resident Medical Officer to the Jersey General Dispensary, vice E. G. Archer, M.R.C.S.E., resigned.

ERITH, W. E. N., M.R.C.S.E., has been appointed House-Surgeon to St. Peter's Hospital, Berners-street.

EVANS, S., L.R.C.P.L., M.R.C.S.E., has been appointed Certifying Factory Surgeon for Harwich.

FULSHAW, R., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Earl Shilton District of the Hinckley Union, Leicestershire, vice Spencer, deceased.

GAMBLE, B., L.K.Q.P.I., has been appointed Superintendent Medical Officer of Health for the Enniskillen Rural Sanitary District.

GILLIGAN, M., M.D., has been appointed Superintendent Medical Officer of Health for the Edenderry Rural Sanitary District.

GILMORE, S., L.R.C.P.Ed., has been appointed Superintendent Medical Officer of Health for the Castleblayney Rural Sanitary District.

HADDEN, E., L.K.Q.C.P.I., has been appointed Superintendent Medical Officer of Health for the Clonakilty Rural Sanitary District.

HERRING, J. F., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Builth District of the Builth Union, vice Jones, resigned.

KENNEDY, D., M.D., has been appointed Superintendent Medical Officer of Health for the Castlederg Rural Sanitary District.

KEYS, R. A., L.R.C.P.Ed., has been appointed Superintendent Medical Officer of Health and a Sanitary Officer for the Stranorlar Rural Sanitary District.

LAFFAN, T., L.K.Q.C.P.I., has been appointed Superintendent Medical Officer of Health for the Cashel Rural Sanitary District.

LANE, A., M.D., has been appointed Superintendent Medical Officer of Health for the Coleraine Rural Sanitary District.

LANE, W., M.D., has been appointed Superintendent Medical Officer of Health for the Newtownlimavady Urban Sanitary District.

LANGSTAFF, H. H., M.B., C.M., has been appointed a Sanitary Officer for the Athlone Urban Sanitary District.

LORRAINE, W. J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the East Ardsley District of the Wakefield Union.

MAC ARTHUR, D., L.R.C.P.Ed., L.M., L.F.P. & S. Glas., has been appointed Medical Officer for the Stanley-cum-Wrenthorpe District of the Wakefield Union, vice Wood, whose appointment has expired.

MAYBERRY, G. M., M.D., has been appointed Superintendent Medical Officer of Health and a Sanitary Officer for the Kenmare Rural Sanitary District.

MAYNE, C. C., M.B., C.M., has been appointed Superintendent Medical Officer of Health and Sanitary Officer for the Dalkey Urban Sanitary District.

MOLONY, D., L.R.C.S.I., has been appointed a Sanitary Officer for the Cashel Rural Sanitary District.

MORRIS, M. O'K., M.D., has been appointed a Sanitary Officer for the Cashel Rural Sanitary District.

O'KELLY, J., M.D., has been appointed Superintendent Medical Officer of Health and a Sanitary Officer for the Mount Bellew Rural Sanitary District.

O'RYAN, A., L.R.C.S.I., has been appointed Superintendent Medical Officer of Health for the Carrick-on-Suir Rural Sanitary District.

OVERTON, J. G., M.D., M.R.C.S.E., has been appointed Medical Officer for No. 3 District of the Coventry Union, vice J. Overton, M.R.C.S.E., deceased.

PRIESTLEY, W. S., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the St. Faith District and the Workhouse of the St. Faith Union, Norwich, vice Thompson, deceased.

ROCHE, J., M.D., has been appointed Superintendent Medical Officer of Health for the Fermoy Rural Sanitary District.

RYAN, R. S., L.R.C.P.Ed., has been appointed Superintendent Medical Officer of Health for the Callan Rural Sanitary District.

SCOTT, J. M., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed House-Surgeon to the Lancaster Infirmary and Dispensary, vice Preston, resigned.

SMITH, A. W., M.D., F.F.P. & S. Glas., has been appointed a Physician to the Royal Infirmary, Glasgow, vice Anderson, appointed to the Western Infirmary.

SMITH, T. B., M.R.C.S.E., has been appointed House-Surgeon to the Bridgnorth Infirmary and Dispensary, vice Parry, resigned.

STEELE, H. O., M.R.C.S.E., has been appointed Medical Officer of Health for the Hunsworth Urban Sanitary District: £10 per annum; acreage 1100; population 1300.

THOMAS, W., M.B., F.R.C.S.E., has been appointed a Surgeon to the Birmingham and Midland Free Hospital for Sick Children, vice Bracey, resigned.

TURNER, H., M.R.C.S.E., has been appointed Medical Officer for No. 1 District of the Forehoe Incorporation of the Poor, Norfolk, vice Francis, deceased.

WEBB, T. W., L.R.C.P.Ed., has been appointed a Sanitary Officer for the Cashel Rural Sanitary District.

WOODS, T., M.D., has been appointed Superintendent Medical Officer of Health and a Sanitary Officer for the Parsonstown Rural Sanitary District.

WREFORD, S., M.R.C.S.E., has been appointed House-Surgeon to the York County Hospital, vice Kebble, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BOND.—On the 2nd inst., at Parliament-street, the wife of Thomas Bond, F.R.C.S.E., of a daughter.

BUTT.—On the 1st inst., at South-street, Park-lane, the wife of W. F. Butt, Esq., of a son.

LYONS.—On the 6th inst., at Vicarage-gardens, Campden-hill, W., the wife of A. De Courcy Lyons, M.R.C.S.E., of a daughter.

THOMAS.—On the 1st inst., at Bradford-street, Birmingham, the wife of Wm. Thomas, F.R.C.S.E., of a son.

WRIGHT.—On the 8th inst., at Wellingborough, the wife of J. B. Wright, M.D., of a daughter.

MARRIAGES.

PLAYNE—SUTER.—On the 4th inst., at the Parish Church, Cookham, Alfred Playne, M.B., to Sarah Seamark, daughter of the late Robert Suter, Esq.

WILSON—BUCHANAN.—On the 4th inst., at Sandiford-place, Glasgow, J. G. Wilson, M.D., F.R.S.E., Professor of Midwifery, Anderson's University, Glasgow, to Edith Gray, youngest daughter of the Rev. Robt. Buchanan, D.D., of Glasgow.—No Cards.

DEATHS.

CHESMAN.—On the 9th inst., Thos. Chesman, F.R.C.S.E., of Sheffield.

HENWOOD.—On the 9th inst., J. D. Henwood, M.D., of The Terrace, Camberwell, aged 61.

LE GRAND.—On the 4th inst., F. W. Le Grand, M.D., of Manor-road, Newcross, Deputy Inspector-General of Hospitals and Fleets, aged 69.

MACKERN.—On the 7th inst., at Eastbourne, Sussex (after a few days' illness), Thomas Mackern, M.D., of Eliot-place, Blackheath.—American and Colonial papers, please to copy.

RIDGE.—On the 9th inst., J. J. Ridge, M.D., of Erith, aged 63.

SAVERY.—On the 2nd inst., John Savery, M.D., of Roselands, Hollington, near Hastings, aged 76.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

Notes, Short Comments, and Answers to Correspondents.

PATHOLOGICAL IDEAS IN PARIS.

THE French capital has been noted for great enthusiasm as to the modern modes of investigation and researches in morbid anatomy. Paris is looked upon as belonging to the anatomico-pathological school. Montpelier inclines to animism; and no wonder if, in a review of Dr. Peter's clinical lectures in the *Montpelier Médical*, M. Castan is delighted to find the following passages in one of Prof. Peter's lectures. The latter (the same who was present at the Norwich meeting) complains that modern science has been especially busy with material facts—viz., semeiology, pathological anatomy, and pathological experiments; the latter hardly ever proving anything more than the phenomena observed upon the animal which is the subject of the experiment, and he goes on to say: "Hence we have the strange fact that medical conviction has sought aid everywhere but in the hospital wards. I cannot subscribe to this mode of proceeding; for it is just as imprudent to submit blindly to tradition as to reject the latter without control, merely because it is a thing of the past. We may, without offending modern susceptibility, believe that some men of great merit have cultivated medicine before us, and that these men were neither fools nor enthusiasts. Medical observation was not born of yesterday, nor is presumption altogether a modern defect. I hold in great estimation the discoveries of our science, and am myself an industrious investigator in pathological anatomy; but I think that the real physician should endeavour to conciliate what is reliable in the knowledge handed down by our forefathers with really useful medical novelties, and not fall blindly in love with the latter. To change our medical methods every quarter of a century is not really progressing; the organism of patients does not change once in twenty-five years. Such improvements lead to confusion, and the victim of these changes is not the physician, but the patient.....In most complaints the actual material lesion does not lead to proper treatment; it is rather the reverse, and simply because we have but seldom direct means of acting upon this lesion; it is only through the general treatment that we succeed in reaching it. General treatment acts upon the lesion, whether the latter be of a syphilitic or a gouty nature. In pneumonia, for instance, pathologists ascertain that so many square inches of lung are attacked, and here they stop; although everything is in a morbid condition in a patient suffering from pneumonia. No doubt the lung is functionally disturbed; but the whole organism is, on the other hand, functionally out of order. The lesion is not the whole disease; thus one patient will die with a slight lesion, and another recover with more extensive lung mischief. The disease lies much more in the general condition, in the symptoms taken as a whole, in the accompanying fever, than in the functional disturbance excited by the lesion. Thus we should direct our attention more to the pneumonic patient than to the pneumonia."

L. V.—Our correspondent had better procure the Students' Number of THE LANCET, where he will find the information he seeks.

Ilex might apply to Messrs. Churchill, the medical publishers.

A NEW GALVANIC CAUTERY BATTERY.

To the Editor of THE LANCET.

SIR,—The difficulties attending the application of the usual forms of galvanic cautery have for some time past engaged our attention, since they form considerable drawbacks to the extended use of so valuable an instrument.

The apparatus at present employed, from Middledorpf's downwards, have many faults of construction. The exciting fluids being sulphuric and nitric acids, must be added to the elements some time before the cautery is required, and fumes of a most acrid character are given off during this period; added to this, the instruments are for the most part unreliable, not only as regards the degree of heat generated (a most important item), but actual action of any kind. This latter serious drawback was notably apparent in a recent case which we had with Sir Henry Thompson, where, although the battery had been most carefully prepared and tested immediately before the operation, it was perfectly inert when required for use. As all these objectionable batteries are excited to action by the presence of nitric acid in addition to sulphuric, we were led to hope that the substitution of bichlorinate of potass for the former acid would not only obviate the unpleasant fumes and other disagreeables attending the generation of the current, but furnish a more reliable and manageable degree of heat. For some time we have experimented in this direction, and are now enabled to submit to the profession the result of our labours. We have succeeded in constructing an instrument which fulfils all the requirements sought for. It is very portable, emits no fumes nor disagreeable smells, can be thrown into or out of action at once without trouble, and is so completely under control that any degree of heat can be called into requisition at the will of the operator. Once charged, it will remain fit for instant use many times; thus obviating the disagreeable necessity of removing the acid liquids and cleaning the plates directly after use, as in other batteries. We have had the pleasure of placing one of these batteries at the disposal of Dr. Barnes, and another at that of Mr. C. Heath for trial. The one submitted to Dr. Barnes was employed successfully by him in a private case, and a few days afterwards in three successive cases in St. Thomas's Hospital, without any change of fluid or deterioration of power. Mr. C. Heath employed his in two private cases on different days, and with the same satisfactory result. We are authorised to state that both gentlemen are highly pleased with the working of the battery. It has also been successfully used by Mr. C. Heath at University College Hospital.

Yours obediently,

Great Portland-street, W., Nov. 1874. MAYER AND MELHUISH.

"LASCAR SAL."

READERS of Dickens's last and unfinished work, "Edwin Drood," will be interested to learn that the female opium-smoker depicted by our great novelist, and who went under the euphonious cognomen of "Lascar Sal," died miserably a short time back in a court in Bluegate-fields, St. George-in-the-East. She was attacked with scarlet fever, now prevalent in the parish, and her low vitality soon succumbed to the disease. In her room were found several hundred white mice. The apartment itself and its belongings were in a most disgusting condition, necessitating the immediate burning of several articles of raiment and furniture by the sanitary inspector. In this connexion we may state that the effects of opium-smoking are by no means infrequently observed in all their hideousness by some of the medical officers of institutions in the East-end, and by many of the busy, hard-working practitioners of the quarter. Physical degeneration and moral abasement are the inevitable consequences of the indulgence, issuing sooner or later in decrepitude and death. Like intemperance, it is in some constitutions, when once acquired, and especially where there is an hereditary disposition, almost as ineradicable as organic disease, and makes painfully apparent the inherent moral weakness of "poor humanity." The treatment of the vice, like that required in confirmed alcoholism, should be largely infused with kindness and gentle pity.

A Professional Spinster.—We know nothing at all of the matter.

THE NEW CIVIL SERVICE CO-OPERATION AND DR. GEORGE JOHNSON.

To the Editor of THE LANCET.

SIR,—About six weeks ago I was persuaded by an agent of "The New Civil Service Co-operation" to purchase one of their tickets, and I was then asked to allow my name to appear as a "patron." To this I assented, with the understanding that no more was implied than that I was a ticket-holder and a possible purchaser of goods. Late on Friday evening last, the 6th inst., I received one of the Company's Price Lists, when I discovered that, without permission given or asked, my name appeared as "Consulting Physician" at the head of a list of medical men, with whom it was announced that "beneficial arrangements" have been made. I immediately wrote to demand an explanation of this astounding and entirely unauthorised use of my name; and on Monday I instructed my solicitors, Messrs. Markby, Wilde, and Burr, of New-square, Lincoln's-inn, to take such steps as they might deem expedient. The result has been an apology, a copy of which I enclose, and I shall feel much obliged by the early publication of the same, together with this explanatory note, in THE LANCET.

I am, Sir, your obedient servant,

Savile-row, Nov. 11th, 1874. GEORGE JOHNSON.

"The New Civil Service Co-operation, Limited,
124, Queen Victoria-street, E.C.,
Nov. 11th, 1874.

"SIR,—We find that, through a misunderstanding on the part of one of our advertising clerks, your kind consent to honour the Company by becoming a patron has been misconstrued, and your name inserted in the Price List of the New Civil Service Co-operation, Limited, as Consulting Physician to the members under certain beneficial arrangements. We readily admit that this was an entire error, and we have therefore erased your name as Consulting Physician from every copy in our possession, and undertake that it shall appear in future merely amongst the list of patrons.

"You are quite at liberty to publish this letter, and we sincerely regret that any mistake should have occurred.

"I remain, Sir, your obedient servant,

"F. R. H. DRUMMOND HAY, Lt.-Col.,
"Secretary of the New Civil Service Co-operation, Limited.

"George Johnson, Esq., M.D., F.R.C.P.,
11, Savile-row, W."

"JACK OF BOTH SIDES, SYMPATHETIC BUT DOUBTFUL, AND BY NO MEANS BRIGHT."

THE current number of our facetious contemporary, *Fun*, contains a cartoon happily designated as above, the point and moral of which are most admirable. Mr. John Bright is standing on the pavement, in the dress and attitude now rendered traditional by the comic illustrated papers, watching a procession of female geese and male donkeys, bearing banners with the inscriptions of "Down with Doctors" and "Liberty and Small-pox." The picture faithfully represents the expression of nearly all whose opinions are worth listening to on the pretensions of the anti-vaccination agitators. A squad of shrieking spinsters denouncing the Contagious Diseases Acts might well have been introduced into the picture.

THE IMPOTENCE OF THE MEDICAL ACTS.

To the Editor of THE LANCET.

SIR,—You have recently drawn the attention of your readers to the impotence of the Medical Acts as far as relates to the suppression of quackery and the conviction of unqualified practitioners. The difficulty of obtaining a conviction even in the most flagrant cases of unqualified practice is now so great that few private practitioners will undertake to institute proceedings against quacks and unqualified persons; consequently London and the provinces "swarm" with charlatans, who practise with impunity, to the great danger to the public and injury to the profession. Even were the law in a satisfactory state, and there was no difficulty in obtaining convictions, private practitioners naturally shrink from prosecuting "quacks," lest it be said that they are actuated by jealousy.

It has been suggested that an Association be formed for the purpose of prosecuting irregular practitioners, and, if the present law is not sufficiently stringent to secure conviction, to take such steps as may be necessary to effect reform of the Medical Acts. If any of your readers feel interested in the formation of such an Association, I shall be glad if they will communicate with me by letter at 7, King-street, Snow-hill, E.C.

I am, Sir, your obedient servant,

London, Oct. 31st, 1874. GEORGE BROWN, M.R.C.S., &c.

WOODEN HOSPITALS.

DR. JOHN DAY, of Geelong, has published a little pamphlet, the materials of which originally appeared in the *Australian Medical Journal*, on the Sanitary Advantages of Wooden Hospitals. It contains some suggestive points that claim the attention of surgeons as well as of administrators of institutions for the reception of the sick and injured. The immunity from pyæmia and erysipelas enjoyed by hospitals constructed of wood has been frequently observed in many parts of the world, and has more than once been commented upon in our pages. Military surgeons employed during the late Franco-Prussian war have had much to say on the subject. The secret of the successful treatment of amputations and wounds in wooden sheds, Dr. Day considers to be due to the property certain kinds of wood—such as deal, American pine, &c.—have of acting on atmospheric oxygen, and converting it into peroxide of hydrogen: a substance thought to possess considerable power of neutralising the products of decomposing organic matter, and which Dr. Day believes to be a true disinfectant, capable of destroying zymotic poisons which may be floating in the air. After citing instances of experiments in support of his view, the author, in conclusion, claims for wooden hospitals the following advantages:—That, instead of requiring constant purifying and disinfecting as other hospitals do, they purify and disinfect themselves; that peroxide of hydrogen, the disinfecting agent they generate, contains oxygen in a highly condensed and active form; that, in consequence of these conditions, the inmates of wooden hospitals are nearly free from hospital gangrene, erysipelas, and puerperal fever.

POST-MORTEMS IN WORKHOUSES.

THE following is the official letter sent by the Local Government Board to Dr. Diver, of the Portsea Union, which is referred to in another page. We regret that we have not space for the insertion of Dr. Diver's letter to the Board, in which he showed that in several instances of alleged malpraxis on his part *no post-mortem whatever had been made*.

Local Government Board, Whitehall, S.E.,
5th November, 1874.

SIR,—The Local Government Board have given their careful consideration to the circumstances under which the guardians of the Portsea Island Union have suspended you from the discharge of your duties as medical officer of the workhouse, and to the explanation on the subject contained in your letter of the 15th ultimo.

The Board find, from the guardians' letter reporting your suspension, that at a meeting which was held on the 16th October, 1872, you applied for permission to make post-mortem examinations of the bodies of pauper inmates of the workhouse when it appeared necessary to you to do so, and that the guardians acceded to your application, provided that you obtained the consent of the friends of the deceased. Whether you in all cases made the requisite inquiries to satisfy yourself, either that the deceased person had no relatives to whom applications could be made for their consent to the post-mortem examination, or that they did not object to it, is open to some doubt. As, however, the Board acquit you of any improper motives in making these post-mortem examinations, they do not think it necessary to express any positive opinion on this point. The Board observe that you state these examinations have been made by you in the interests of science. The Board consider that the workhouse is not a proper place for making post-mortem examinations for this object; and they must, therefore, require that in future you will not in any case make such examination excepting by the direction of a coroner when holding an inquest, or the direction of the guardians for some special urgent and peculiar reason, which they may deem of such importance as to render such examination necessary. The Board think that the guardians themselves would hardly be justified in directing in any particular case that a post-mortem examination should take place if the nearest relatives of the deceased objected clearly and decidedly to the course; and the guardians would, so far as circumstances will permit, do well to satisfy themselves of the necessity for such an examination before they take upon themselves to authorise it. As a general rule, post-mortem examinations ought only to take place in workhouses for the purpose of discovering the cause of death when it cannot be otherwise ascertained. The Board, in pursuance of article 192 of the General Consolidated Order, hereby remove your suspension, in order that you may resume the performance of the duties of your office.

I am, Sir, your obedient servant,
DANBY P. FRY, Assist.-Secretary.

To Thomas Diver, Esq., M.D.,
Medical Officer, Kent-road, Southsea.

A FOOLISH VICTIM.

THE *France Médicale* quotes from the *Journ. de Clin. Méd.* the case of a young man who had laid a wager that he would smoke twelve cigars consecutively. After the eighth he experienced some general uneasiness; on the ninth he felt some vertigo, and had vomiting; and on the tenth he was worse. He, however, refused to give up. At last he was taken home by some friends, was seized with pain in the bowels and renewed vomiting. A medical man was sent for, but could not stop the symptoms, and the poor fellow died in the course of the night. The account states that the patient had cardiac hypertrophy. These wagers cannot be too strongly condemned.

FRACTURE OF THE FŒTAL SKULL.

To the Editor of THE LANCET.

SIR,—Some time ago I attended a case of (otherwise) natural labour, in which the fœtal skull sustained a fracture. The fracture is a depressed one, with spicula projecting internally. It is situated about the middle of the right parietal bone, which is split up from the depression to the sagittal suture on one side, and the coronal on the other. I should be obliged if some of your correspondents would inform me regarding the frequency of this accident, as I can find no mention of it in the ordinary text-books, and, I imagine, the possibility of its occurrence without external violence is of considerable interest in a medico-legal point of view.

I am, Sir, yours truly,
Wingate, Oct. 28th, 1874. JAS. M. MONTEITH, M.B.

THE MARTINI-HENRY RIFLE.

WE have noticed a paragraph to the effect that the Martini-Henry rifle has recently been tested in the 60th Rifles, and that some of the best shots in the regiment were selected to fire a hundred rounds. As far as the shooting was concerned, the weapon proved satisfactory enough; but it is stated that, on the men being examined by the surgeon of the regiment, it was found that the effect of the recoil was such as effectually to prevent their taking part in any further practice on the following day. If it be the case that the integument shows the effect of the concussion in the shape of bruises after a hundred rounds, it is clear that, whatever be the precision of the rifle, it is not adapted for warfare in its present condition. We suspect, however, that rifles of the unaltered pattern were used, and we are given to understand that, with some modifications and a diminution of the charge, the recoil may be overcome without in any way affecting the efficiency of the weapon itself.

Mr. Warner is thanked for his courtesy. The extract from the "Memoirs" enclosed has, however, already been noticed in our columns.

CHINESE TREATMENT OF SMALL-POX.

To the Editor of THE LANCET.

SIR,—The following particulars may be interesting to the readers of your journal.

There is probably no country in the world where small-pox is more prevalent, and at the same time more dreaded, than in China, and I have often been struck by the numbers of pock-marked persons I met in Hong-Kong, Shanghai, &c. It is present in isolated cases all the year round, but is more prevalent in the spring than in any other time. However, very few Chinamen die from the disease, and a confluent case is comparatively rare. As soon as a case has occurred, the patient is placed in a room apart from the rest, which has first been well washed and scoured out, and every particle of dirt removed—in fact, the most perfect cleanliness is observed. Now this in itself is sufficient to prove how the disease is feared, as a dirtier and more wretched lot of people it would be impossible to find (I refer, of course, to the lower classes); seldom washing at all, swarming with vermin; their houses extremely wretched hovels, not fit for a dog, much less a human being; as a rule they only clean them once at the commencement of the new year. The room is washed, cleaned, and fumigated every day. They also adopt a peculiar diet: thick rice-water and a sort of cake made of rice and sugar, called small-pox cakes, or fee-yee-kow (containing much sugar), and a nut called mah-sai; these two (the cakes and nuts) can be obtained at any confectioner's, but they give no other medicine. In the northern parts of China, where no sugar grows, it is imported in large quantities, and the people keep it in their houses on purpose. They believe the sugar-cane to be a preventive, and the more eaten the better for the patient, as it also renders the disease milder if already present. If the patient is in much pain, the part which is painful (as the head, back, chest, &c.) is operated on in the following way:—The doctor takes a sharp needle, and, seizing a small portion of the skin between the thumb and finger of left hand, he carefully picks out a few small bits until a place about the size of a small pea is produced; this he repeats in two or three different situations, and he afterwards rubs in certain herbs and powders, supposed to exert a favourable influence over the disease generally, but more especially as exhibited in the particular part operated on. All offensive smells are avoided, and to that effect the doors and windows of the sick room are kept carefully closed; these being kept shut is also supposed to prevent the entrance of bad spirits. They appear to overlook the fact that they also prevent good ones from entering, which might counteract the effects produced by the bad. All kinds of wine and spirits are carefully excluded, as they are deemed peculiarly offensive to the god of small-pox, and they believe if anybody who has been indulging in spirits visits the room the patient becomes worse. Sugar-cane is constantly burned in the room, as it is supposed to exert a powerful effect for good. As the Chinese are excessively superstitious, it may be asked whether they have no part of their treatment suggested by this fact; and they have. On the third day after the pustules have begun to appear, it is a universal custom for one of the family to go to a baking establishment, and procure a piece of yeast, which they divide into ten; these are steamed, and soon begin to swell; they are then removed and placed before the picture of the goddess of small-pox. This is to cause her to exert her influence to have the papules redden, fill up, and swell like the yeast. Two days afterwards this is repeated, and again in another two days. The most important and critical period is said to be these seven days. On the ninth day, fish, meat, sweetmeats, paper money, &c., are presented as an offering to the goddess if the patient does well, but not otherwise. Whenever it thunders, a gong or drum is beaten as long as it lasts, to prevent the pustules bursting! On the fourteenth day a few black beans which have a small green speck upon them are roasted until brittle, and placed upon a stool before the goddess. The patient is placed in a sitting posture upon a large winnowing sieve, on the top of his head is put a piece of red cloth, and the beans taken from the goddess are placed on it. This is to indicate the strong desire that the pustules should dry up, and become like the parched bean. Should he recover, great rejoicings take place; his friends are invited to a feast, and in presence of all he worships the goddess of small-pox, burns incense, paper money, &c., before her, his most particular friends joining if they wish. Should he die, he is carried with great lamentations to the grave; paper money, rice, sweetmeats, &c., are placed for his use in the land to which he has gone. The graves of some of the higher classes, as mandarins &c., are peculiar. They are triangular; at the top lies the father or head of the family, to his right hand at a little distance is his eldest son, and to his left his chief wife; before all are placed flowers, candlesticks, vases, &c.; and at the anniversary of the death, food, paper money, &c., are burned before them.

I remain, Sir, yours truly,
Riseley, November, 1874. C. J. STOCKER, M.R.C.S.

CHLORAL IN VETERINARY SURGERY.

THIS agent has been tried in Paris to render unmanageable horses less fiery, and it succeeded to the extent that the horses were rendered very tractable, so as to be driven with great ease; but it was discovered that they turned very sleepy and lazy, so that the practice was soon given up. The doses are not mentioned; but it may be supposed that the bad results just named would perhaps not have occurred with small and repeated doses.

SOME STATISTICS OF PARIS.

THE Prefecture of the Seine has recently published some interesting statistics of Paris for the year 1873. The total number of births amounted to 55,905, the most prolific quarters being the poorer ones, such as Belleville, &c. The marriages amounted to 19,520; of these, 2 occurred between nephews and their aunts, 26 between uncles and nieces, 103 between brothers and sisters-in-law, and 180 between first cousins. The deaths were 41,732, of which 7919 were from tubercular diseases, and 782 from natural decay. No less than 600 persons committed suicide. An enormous quantity of wines of various sorts and brandy appear to have been drunk. The following is a summary of climatic records during the year: High wind prevailed for 30 days, rain for 70, snow for 13, hail for 7, and fog for 54 days. In the latter particular the Parisians would seem to be as badly off as we are.

PRURITUS VAGINÆ.

To the Editor of THE LANCET.

SIR,—In a late number of THE LANCET inquiry has been made as to the best treatment for pruritus vaginæ. Will you permit me to say, through your columns, that I have found a dilute solution of tincture of iron much more effectual than any of the methods advised by your correspondents in this troublesome disease. In pruritus ani also the tincture has been equally successful in my hands. In these cases I endeavour to ascertain if the patients are addicted to opium- or chloral-eating, as I have found pruritus caused by this class of medicines when habitually taken. The treatment in these latter cases is obvious. In treating pruritus I do not neglect to give aperients, and perhaps the most suitable is an occasional saline in the morning; seidlits will do very well if taken before breakfast.

I remain, Sir, yours truly,

Dumbarton, Nov. 5th, 1874. D. BLAIR, M.D.

To the Editor of THE LANCET.

SIR,—By a small typographical error, a short passage in my letter which you kindly published in your journal last week, has been rendered unintelligible. May I ask permission to correct the same in your next impression? The passage in question reads thus: "In addition I apply a solution of nitrate of silver, three parts to an ounce," &c. It ought to read, thirty grains to the ounce. Yours obediently,

Bolton-row, Mayfair, W., Nov. 1874. THOMAS CHAMBERS.

To the Editor of THE LANCET.

SIR,—My attention has been called to a letter from Dr. Thos. Chambers in THE LANCET of last week, in which he says: "In your impression of Oct. 24th, Dr. Atthill states: 'It is well enough known that pruritus vaginæ or vulvæ is symptomatic of malignant mischief.'" As from Dr. Chambers having omitted the Christian name of the writer of the letter referred to, it has been, I am aware, by some attributed to me, allow me to state that I am not the author of it, and that my experience is quite at variance with that of the writer. Your obedient servant,

LOMBE ATTHILL, M.D.

Upper Merrion-street, Dublin, Nov. 9th, 1874.

A Builder.—Parian is generally preferred for hospital purposes. It is very expensive, however, and it is liable to become discoloured after a time, and the aqueous vapour in the ward atmosphere condenses on its surface. On the whole, we would suggest that the walls should be well painted with several coats of white paint, rubbed down so as to present a smooth surface, and varnished. This, if carefully done, renders them, practically, non-absorbent, and allows of their being washed and repainted as occasion requires; paint, moreover, compared with parian cement, is cheap. If the wards are for ordinary cases of disease, and not for operations and accidents, and expense is a matter of importance, we think that ordinary lime-washed walls might suffice.

Mr. H. C. Williams.—Not yet.

THE AMENITIES OF PRACTICE.

To the Editor of THE LANCET.

SIR,—The time seems arriving when we must neither expect help nor courtesy from our brother practitioners. I came down to this place, a suburban town, some few months ago to take temporary charge of a practice, and yesterday morning was summoned to a midwifery case just on the outside of the town. After remaining some time, I gave a dose of liquid ergot; and as a second dose produced no effect, I decided to try a freshly-made decoction, and, to save time, went myself to a druggist near, but failed to procure any; and, as the next chemist lived some distance off, I repaired to the house of a surgeon close by, whom I found behind the counter, introduced myself, and mentioning my principal's name (whom I have been with when they have met and spoken to each other on a round), asked if he would kindly oblige me with a little ergot, as I was attending a case of midwifery close by, and could not be absent from my patient long; I also stated that I was a medical man, and regretted I had no card with me. Well, Mr. S. said there was no proof that what I said was correct, and ended by a refusal. I ask, Sir, does this person ever deserve to have any help from his professional neighbours, or can he expect to be treated with professional etiquette or consideration of any sort?

I am, Sir, your obedient servant,

November 2nd, 1874. L.R.C.P.

DOMESTIC WATER-FILTRATION.

To the Editor of THE LANCET.

SIR,—Our attention having been drawn to the inquiry of "M.D.," we beg to suggest that the silicated carbon filters, as their name indicates, would seem to represent nearest the combination of filtering agents he names, and we shall be happy to give him any information he may require on application at our works in Battersea.—We are, Sir, yours obediently,

THE SILICATED CARBON FILTER COMPANY.

Church-road, Battersea, Nov. 9th, 1874.

*** We have received letters of a similar purport from Dr. West Symes, of Skipton, and Mr. R. L. Bowles, Folkestone, speaking in terms of high praise of the filter.—ED. L.

THE ANTIDOTE OF HYDROCYANIC ACID.

DR. PREYER, of Bonn, maintains that atropine is the antidote of prussic acid. Now come Boehm and Knie, who deny this *in toto*. They used cats for their experiments, and injected the acid into the jugular vein. Tracheotomy was then performed, and they found that atropine was of no use. These gentlemen consider that the only reliable antidote is artificial respiration.

Mr. Beckett, (Blyth.)—Such a question should be submitted to a solicitor. We really cannot answer it.

A MEDICAL VETERAN.

To the Editor of THE LANCET.

SIR,—I can claim for my father, Mr. John Wyer, of Whitchurch, Dorset, a longer connexion with the Army Medical Department than that of the late Dr. Galeani, whose death you notice in the last issue of THE LANCET. Mr. Wyer joined the service on Feb. 5th, 1811, as hospital assistant, and forthwith sailed for Lisbon. He served in the Peninsula from March, 1811, to May, 1814, being present at the taking of Ciudad Rodrigo, the assault of Badajoz, the battles of Salamanca, Vittoria, Noelle, Orthez, and Toulouse. He served in Canada from August, 1814, to May, 1815, and was at the affair of Platzburgh. Hurriedly recalled with all the available troops, he arrived just too late for Waterloo, but was at the entry of the allies into Paris, serving with the army of occupation from July, 1815, to May, 1816. He served at the Cape of Good Hope from 1824 to 1830, and in the West Indies from November, 1834, to August, 1835. After some home service he retired as surgeon half pay, 19th Regiment, 1840, on account of ill-health. He is now living, and in his 86th year.

It may not be uninteresting to some of your readers to see this slight sketch of a very eventful life. Yours faithfully,

Leamington, Nov. 10th, 1874. OTHO F. WYER, M.D.

Inquisitor.—A medical officer of health has no *right* to interfere with the management of the sick-room in cases of infectious disease, or to cause structural alterations in a house, even with the consent of the medical man in attendance. It is most desirable that he should work amicably with his brother medical practitioners, and give such help in processes of disinfection, in securing ventilation, and in the removal of unwholesome conditions generally as they may need, and heads of households and proprietors of houses may permit. But the medical officer of health can exercise no compulsory powers, and has no right of interference independently of his sanitary authority; and the extent to which the powers extend, and the manner in which they are to be exercised, and the right of action of the medical officer of health, may all be learned from the official digests of the sanitary statutes, prepared especially for the elucidation of difficulties such as those upon which "Inquisitor" seeks information.

SUDDEN DEATHS AND INQUESTS.

To the Editor of THE LANCET.

SIR,—The Barrow-in-Furness case, reported in THE LANCET for the past two weeks, brings to my recollection an almost similar one which occurred here.

A few weeks since a hand at one of the large bleachworks in this neighbourhood, while at his usual occupation, exclaimed "Bill!" to a fellow-worker, and dropped dead. Some time after death, and when he was removed home, a medical man was called in; but he could discover nothing by an external examination which would at all point to the cause of death. He was a well-built man, of medium height, and, from his wife's statement, had always enjoyed good health, though not over-temperate. One morning, about a month before his death, he complained of a "beating at the heart." There was no post-mortem, nor was any medical witness examined at the inquest; and yet the jury, with insufficient evidence even to infer the probable cause of death, decided that the man died from heart disease.

Yours truly,

Bolton, Nov. 5th, 1874. Y.

Aquæ Potor.—1. Constantinople, hitherto badly off as to drinking-water, is shortly to be well supplied in every sense from Lake Derkos, which is to be tapped and brought to the city by Mr. Bateman, the engineer who provided Glasgow with the water of Loch Katrine.—2. Salt in drinking-water *is* indicative of sewage contamination. This is true enough, provided the water be well-water, and provided neither salt-bearing strata nor sea be in the vicinity of the well. But Lake Derkos water, which contains what a water analyst would call much salt, although not enough to make it brackish or in any way disagreeable or unserviceable, is not on that account to be condemned.

Mr. John Horsfield.—No.

POST-MORTEM FEES.

To the Editor of THE LANCET.

SIR,—Whilst the subject of post-mortem fees is under consideration, allow me to say that I, like "Scrutator," have a considerable number of post-mortems annually, and my experience has been limited to Mr. Humphreys and the late Dr. Lankester. The summoning officer of the latter coroner invariably hands me £2 after the inquest; but with Mr. Humphreys' beadle I am not so fortunate, as I have had to make continual application for even six months before that functionary has condescended to hand over the money, and then submit to the unreasonable deduction of all the odd shillings. I am, Sir, yours &c.,

Nov. 9th, 1874. ONE NOT SO FORTUNATE AS SCRUTATOR.

TREATMENT OF GLEET.

To the Editor of THE LANCET.

SIR,—A patient of mine having suffered from gleet considerably over twelve months, and as I have failed to cure him, I ask to be allowed through your columns to solicit the opinions of those practitioners whose success has been greater than mine in the treatment of this disease, with the view to their suggestions being rigidly carried out. I would state that I have tried injections of every kind, including the "hydrastin" lately recommended in your columns; also tonics, such as iron, quinine, &c.; and each and everything has been unavailing. Yours &c.,

November 9th, 1874. F.R.C.S.E

Naturalist, (Dublin.)—Sir Hans Sloane is generally credited with having been the first physician to introduce the use of bark as a febrifuge into the practice of medicine.

Dr. Dearden.—The matter has not been forgotten.

CANAL BOATS.

To the Editor of THE LANCET.

SIR,—In reference to the remarks made by your correspondent, Mr. Davenport, as to my suggestion to treat canal boats as houses, I beg to say that in Ireland they are registered, and their owners' names and addresses known. If such be the case in England, I do not see any difficulty in summoning the owners of any boat found to be in an unsatisfactory condition.

Your obedient servant,

November, 1874. CHARLES A. CAMERON.

ERRATUM.—In our obituary list last week, the date of the decease of Mr. William Hugman was given as the "20th ult.," instead of the 20th September.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Rutherford; Sir Francis Knowles, Bart.; Dr. George Johnson, London; Dr. R. Lee, London; Mr. Erichsen; Dr. Hughlings Jackson; Dr. Aveling, London; Mr. Waltord, King's Lynn; Mr. W. Bennett; Dr. Rees-Phillips, Cheltenham; Mr. Warburton, Pateley Bridge; Dr. West Symes; Mr. Bowles; Mr. Burroughs, London; Mr. Archer, Jersey; Mr. Somerville, Macclesfield; Dr. E. Crisp, London; Dr. Daly, London; Mr. John Gill, London; Mr. Poole, London; Mr. Banks; Mr. Reed, London; Mr. Davidson; Dr. Wyer, Leamington; Mr. Sweet, Tenbury; Messrs. Oliver and Son, Sudbury; Dr. Veale, Chatham; Dr. Hay, Hull; Mr. Milson, London; Mr. Gover, London; Mr. Taylor, Liverpool; Dr. Donny, Queensland; Dr. Maclagan, Hexham; Mr. Gaddes, London; Mr. S. Osborn, London; Mr. Harrison, Liverpool; Dr. Whipham, London; Dr. Grayling, Sittingbourne; Dr. Blair, Dumbarton; Mr. Robinson, Dublin; Mr. Harry; Mr. Lorimer, Farnham; Mr. Whitefield, London; Dr. Chambers, London; Dr. Cockerton, London; Surgeon-Major Turton; Mr. Williams, London; Mr. Coleman, Leeds; Dr. Atthill, Dublin; Mr. W. Mason; Mr. Warner, Cirencester; Dr. Bakewell; Mr. North, York; Mr. S. Wreford, London; Dr. Stebles, Reading; Mr. Deschamps; Rev. R. East, Newcastle; Mr. Beal, London; Dr. Brunton, London; Mr. Stannard, Peckham; Dr. Ball, Blaenavon; Mr. Jacobson, London; Mr. D. Cooper, London; Mr. Ray, Monaghan; Dr. Yorke, Granard; Mr. Meade, East Grinstead; Dr. Coombs; Mr. Harding, Bideford; Mr. Garner, London; Miss Fay, London; Dr. Whittell, London; Dr. Macfie, Bolton; Mr. Cameron, Dublin; Mr. Dearden, Church; Mr. Whitaker, Derby; Mr. Adcock, Alcester; Mr. Davies, Duffryn Ifrwd; Messrs. Negretti and Zambra; Mr. Kelsall, Ashton-under-Lyne; Mr. Peyton, Southsea; Mr. Whitmore, Kensington; Mr. Horgan, Mexborough; Mr. Broad, Hornsey; Mr. Jones, Chester; Dr. Arnison, Newcastle; Mr. Duncan, Morpeth; Mr. Lyons, Kensington; Mr. Coppen, Ripon; Dr. Morris, Barnsley; Mr. Earnshaw, Eastbourne; Mr. Hilliard, Holloway; Messrs. Smith and Co., London; Mr. Storey, Leicester; Dr. Cook, Manningtree; Mr. Johnson, East Grinstead; Mr. Pickering, Malton; Mr. Bingham, Bristol; Dr. Collins, Ilchester; Dr. Hill, London; H. H., London; A Professional Spinster; The Statistical Society; A Builder; H. S.; A Locum Tenens; F.R.C.S.; Violà Tout; Inquisitor; The Silicated Carbon Filter Company; &c. &c.

LETTERS, each *with enclosure*, are also acknowledged from—Dr. Cosgrave, Standish; Prof. Humphry, Cambridge; Mr. Ball, Pendre; Mr. Calvert, Burnley; Mr. Newberry, Sutton Valence; Mr. Knaggs, Huddersfield; Mr. Horder, Nenthead; Mr. Byerley, Portsea; Mr. Hugman, London; Dr. Dickson, Buxton; Mr. Brendon, New Wandsworth; Mr. Humble, Birkenhead; Mr. Kitts, Sunderland; Mr. Date, Crewkerne; Mr. Crofts, Dover; Mr. Tootell; Mr. Burr, Keighley; Mr. Brunton, Limehouse; Mr. Cheeseman, Sheffield; Mr. Macartney, Stockport; Mr. Dean, Barrow-in-Furness; Mr. Herbert, Cirencester; Mr. Brend, Bideford; Mr. Tickler, Owston Ferry; Mr. Mudd, Pulborough; Mr. Barnett, Mottram; Dr. Platt, Kilburn; Mr. Shield, Milton; Mr. Heaton, Leeds; Mr. Byden, Stockport; Mr. Karkeek, Torquay; Mr. Landy, Birkenhead; Dr. Swaine, London; Mr. Walker, St. Andrews; Mr. Marshall, Mitcham; Dr. Griffith, Camberwell; Mr. Robinson, London; Mr. Higgs, London; Messrs. Calvert and Co., Manchester; Mr. Fox, Bristol; Mr. Cope, Croydon; Mr. Mason, Whitby; Mr. Ricketts, St. Helens; Mr. Nuttall, Bradford; Mr. Richardson, Ballimulloch; Mr. C. Hunter, London; Mr. Bullivant, Derby; Dr. H. Miller, Glasgow; Dr. Hewson, Coton Hill; Mr. May, Tottenham; Mr. Ernst, London; Messrs. Porteous and Co., Glasgow; Mr. Maclehose, Glasgow; Mr. Crowe, Hartlepool; Mr. Stephenson, Lunesdale; Mr. Douglas, Consett; Mr. Hearn, Buckingham; Dr. Dobell, London; Dr. Swan, Bournemouth; Dr. Lowe, Edinburgh; Mr. Scoones, London; Dr. Campbell Black, Glasgow; Messrs. Kinmore and Co., Leamington; Messrs. Goodall and Co., Leeds; Mr. Monckton, Hurstpierpoint; Mr. Whitmore, Kensington; Mr. Eastham, Clitheroe; Mr. Carr, Sherborne; Mr. Hearne, Cinderford; Mr. Currie, Thetford; Mr. Furness, Wreay; Mr. Ellis, Morley; Mr. Ingle, Blackheath; Dr. Sloane, Leicester; Mr. Kelland, Edinburgh; Mr. Bowker, Chesterfield; Mr. Duckworth, Otley; Dr. Mitchell; F. B., Pimlico; E. A. O. R., Dublin; M.R.C.S., London.

Welshman, Newcastle Daily Chronicle, Manchester Guardian, Liverpool Post, Liverpool Albion, Sheffield Daily Telegraph, Metropolitan, East London Observer, Surrey Advertiser, Hampshire Telegraph, Times of India, Cork Constitution, Northampton Mercury, Isle of Man Times, Scotsman, Sussex Daily News, Hamilton Advertiser, and *Ulster General Advertiser* have been received.

METEOROLOGICAL READINGS

(*Taken by Steward's Instruments*).

THE LANCET OFFICE, NOV. 12TH, 1874.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8 A.M.
Nov. 6	30·21	W.	55	55	...	61	45	...	Overcast
„ 7	30·41	N.W.	46	49	...	55	44	...	Cloudy
„ 9	30·39	S.W.	44	46	...	58	35	...	Cloudy
„ 10	30·10	W.	49	51	...	54	45	...	Overcast
„ 11	30·17	N.W.	53	35	...	43	29	...	Frosty
„ 12	29·94	N.	...	33	...	...	27	...	Cloudy

Medical Diary for the ensuing Week.

Monday, Nov. 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

MEDICAL SOCIETY OF LONDON.—8 P.M. Mr. Braine will exhibit a living Specimen of Abnormal Growth of Lip.—Dr. Cleveland: A Specimen of Warty Tumour.—Mr. Napier: Something New (or believed to be so) in the Science of Dental Surgery.—Dr. R. J. Lee, "On Maternal Impressions."

Tuesday, Nov. 17.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8 P.M. The following Specimens will be exhibited:—Epithelioma of the Œsophagus Ulcerating through into the Trachea; Abscess of the Liver associated with Dysentery and Sloughing of Small Intestine; Ovarian Cyst with Muscular Envelope; Induration of the Sterno-mastoid Muscle in an Infant; Cysted Cancer of the Kidney; Double Arch of Aorta enclosing Trachea and Œsophagus; Aneurism of Aorta which Ruptured into the Left Auricle; &c.

Wednesday, Nov. 18.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Nov. 19.

ST. GEORGE'S HOSPITAL.—Operations 1 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HARVEIAN SOCIETY OF LONDON.—8 P.M. Mr. W. F. Teevan, "On Dribbling of Urine; its Diagnosis and Treatment."

Friday, Nov. 20.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

MEDICAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. Goodhart, "On Buccal Psoriasis, or Ichthyosis of Tongue."

Saturday, Nov. 21.

HOSPITAL FOR WOMEN Soho-square.—Operations, 9½ A.M.

ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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